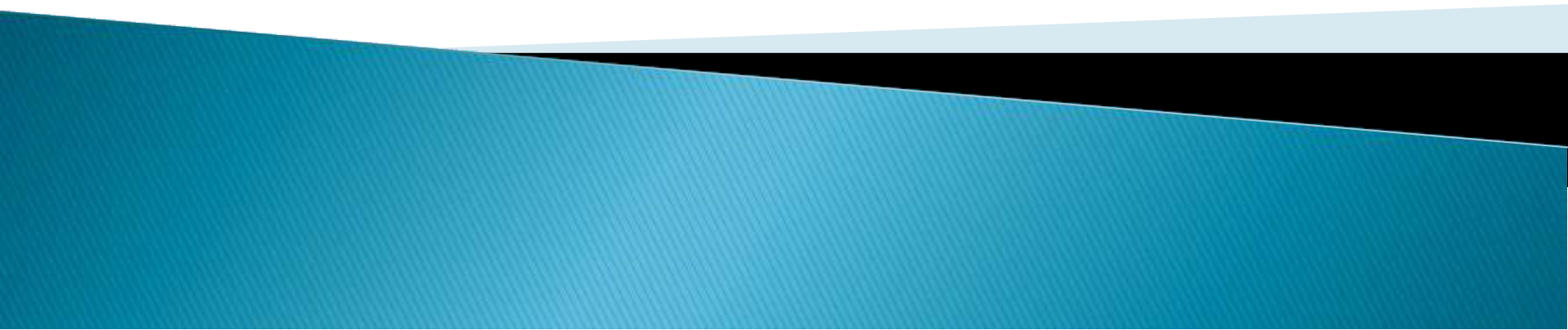


NYSDEC EQuIS Database Data Providers Meeting

April 05, 2018



EQulS Development

Goals for updating the DEC EDD format Version 4

- Modify the format to enable automated loading
 - This has been a goal since the inception of the program.
- Improved EDP logic should make it easier to complete an EDD
 - The EDD may be brightly colored to start with, but when you are done and submit your data, we will be able to load your EDD.

EQulS Development

Many of the changes in
version 4 of the NYSDEC EDD format
have already been implemented in
version 4 of the USEPA EDD format.

NYSDEC EDD version 4 Changes

- Some version 4 improvements involves changes to the 'field description' or the annotation which comes up if you hover over the cell.
 - These are intended to be improvements in communicating the content or purpose of the field.
 - The annotation changes that document the EDD file in the EDD Description will also be updated in our NYSDEC EDD Manual.

NYSDEC EDD version 4 Changes

- There are six major changes to the EDD format
 - Controls on the Sys_Loc_Code / Sys_Sample_Code input
 - Change to the X and Y coordinates
 - Removed several 'well info' columns from Location Section
 - Change to the Subfacility Section
 - Changes to the Qualifier Rules
 - Changes to the Subsurface Investigation Lithology section and guidance

NYSDEC EDD version 4 Changes

- All Sections
- The parameters for the sys_loc_code and the sys_sample_code are controlled by the system to only be alpha numeric with:
- No special characters entered except for the _ () and – Underscore, parenthesis, hyphen
 - Special characters restricted such as:
 - { } ! @ # \$ % ^ & * \ ,

NYSDEC EDD version 4 Changes

- EDD Location Section
- We removed a number of columns from the Location Section which are now in the Well Section and Well Construction Section.
 - This information must be submitted on those Sections

NYSDEC EDD version 4 Changes

Big Change in the EDD Location Section

▶ OLD

▶ Location_v3

contains:

- X_coord and Y_coord
- x_coord 0 and y_coord 0

▶ NEW

▶ Location_v4 contains:

- Latitude and Longitude
- This will reverse the entry to:
y_coord and x_coord
- (Similar to Google Earth)

▶ Also, You may no longer enter:


- Lat 0 and Long 0

This change will alter the NYSDEC format notation for location 'X' and 'Y' to match the USEPA R2 format notation.

Subliminal Message

- ▶ Don't wait. Submit your data.
- ▶ You don't need to write the report to submit your data.

NYSDEC EDD version 4 Changes

- Subfacility Section
 - Subfacility_code
 - Subfacility_type
 - Subfacility_name
 - Subfacility_task_code
- All of these entries contain information which the Department uses to administratively manage projects.
 - In order to more closely align this information with our administrative practices, we have made some changes to how information will be entered.
- 

NYSDEC EDD version 4 Changes

- SUBFACILITY TABLE
- Subfacility_code
 - Will now be an arbitrary number, coordinate with the DEC PM
- Subfacility_type
 - From the rt_subfacility_type table
 - AOC, OU, SWMU, Building, DMM Pesticide County, Double Carbon Filter, Lake, Landfill, Triple Carbon Filter
- Subfacility_name
 - An expanded description of activity
- Subfacility_task_code
 - From the annotated list (change to lookup table in future)
 - Things like: Onsite, Offsite, Area Wide, Leachate, SVI, POET, SOIL, GROUNDWATER and SITE MANAGEMENT

NYSDEC EDD version 4 Changes

- This table only needs to be completed once per subfacility.
- Entries should be coordinated with the DEC PM
- **Subfacility table**

Subfacility_Code	Subfacility_Type	Subfacility_Name	Subfacility_Task
1a	OU	OU01 Remedial Design Soil	Onsite
1b	OU	OU01 Remedial Design Soil	Offsite
1c	OU	OU01 Groundwater	Area Wide
0a	OU	OU00 Landfill O&M	Leachate
H254	BUILDING	Endicott	SVI
447046	Double Carbon Filter	Hoosick Falls 001	POET

NYSDEC EDD version 4 Changes

- ▶ The TestResultsQC Section has improved checks for valid values in the qualifier columns.
 - The qualifier rules have changed – improved.
 - (Currently EPA Region II has not implemented these checks)
 - The DEC EDD contains 3 qualifier columns
 - Lab – validator – interpreted
 - For the EDD, the qualifiers are controlled by 2 questions
 - Is the data validated ? (Validated Y/N)
 - Is there a detection ? (Detect Y/N)

NYSDEC EDD version 4 Changes


Qualifiers: lab – validator – interpreted

Validated Y/N	Lab Qualifier	Val Qualifier	Int Qualifier	Detect Y/N
Y	U	J	J	Y
Y	U		U	N
Y	U	U	U	N

Validated Data

We have revised the rules for qualifiers.

Can now be completed as a validator might complete their own review.



NYSDEC EDD version 4 Changes

Qualifiers: lab – validator – interpreted

Validated Y/N	Lab Qualifier	Val Qualifier	Int Qualifier	Detect Y/N
N	J		J	Y
N	U		U	N

Unvalidated Data

Unvalidated data should carry the lab qualifier to the interpreted qualifier

As long as the qualifier is in the list of DEC of valid values

NYSDEC EDD version 4 Changes

- Subsurface Investigation Lithology Section
- We are making improvements to how we correlate soil and bedrock information between sites:
- This includes updating and expanding the guidance for entering Geologic and Lithologic data.

NYSDEC EDD version 4 Changes

- ▶ Subsurface Investigation Lithology Section
- ▶ Providing improved guidance defining the columns containing soil description data in the lithology section
- ▶ This includes:
 - Improved guidance and valid values for populating the Geo Unit Codes
 - Within the GeoUnit Codes
 - Addition of USCS Major Divisions and USGS Regional Scale Stratigraphy

NYSDEC EDD version 4 Changes

- Lithology Section
- For each soil material type and depth horizon:
 - The NYSDOT Soil and Rock Classification description (Word Picture) should be entered in **Remark1** column of the Lithology Section.
 - The Unified Soil Classification System Code should be entered in the **Material_Type** column of the Lithology Section.

NYSDEC EDD version 4 Changes

- Lithology Section
 - We will be designating the content of the GEO_UNIT_CODES.
 - GEO_UNIT_CODE_1: Aquifer Information
 - GEO_UNIT_CODE_2: Major Divisions of Material Type
 - GEO_UNIT_CODE_3: USGS Regional Scale Stratigraphy
 - GEO_UNIT_CODE_4: Reserve for DEC PM input
 - GEO_UNIT_CODE_5: Auto-populate with FILL, OVERBURDEN, OR BEDROCK

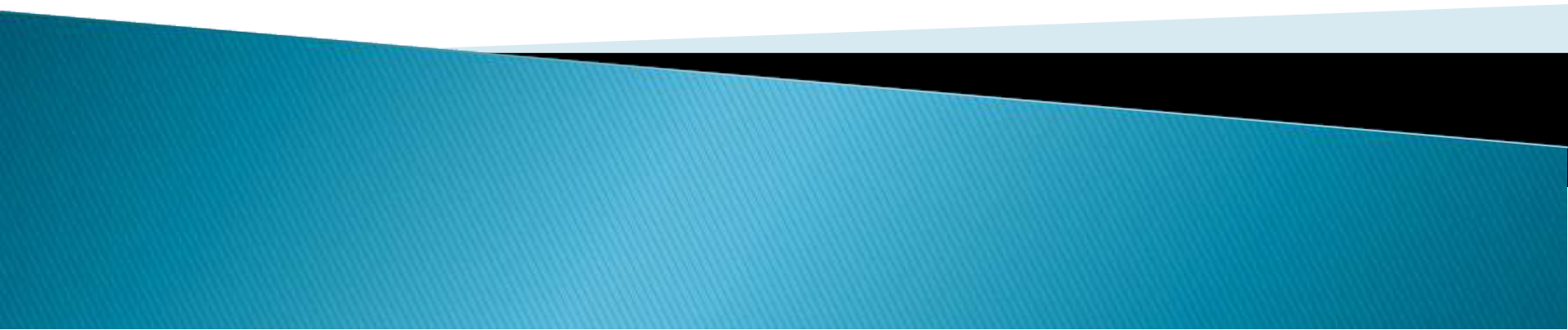
NYSDEC **EDP** Changes

- In order to Automate our data loading process, we have improved the EDP checker with error and warning messages, to convey the checks currently completed manually.

NYSDEC **EDP** Changes

- Enhanced Logic Checker
- Location Section
 - **MW, EXWELL, RW, IW Location types**
 - **Well Section and Well Construction Section will be required for these Location types**

NYSDEC **EDP** Changes

- Enhanced Logic Checker
 - Location Section and Sample Section
 - **Location type = Indoor, Outdoor and Subslab will trigger a note indicating the data should be in the VI Location Section.**
 - **If you enter a matrix of AS, AI, AO in the Sample Section, this will trigger an error stating that this data should be in the VI Sample Section.**
- 

NYSDEC **EDP** Changes

- Enhanced Logic Checker
- TestResults QC
 - **If Detect Y/N = N**
 - **Then the Interpreted Qualifier should = U**
 - **And the corollary**

NYSDEC **EDP** Changes

- Enhanced Logic Checker
- TestResults QC
 - If Validator Qualifier is present
 - Then Validated Y/N = Y
 - If Validated Y/N = N
 - There should not be any info in the Validator Qualifiers column

NYSDEC **EDP** Changes

- Enhanced Logic Checker
 - If a there is a value with a Unit
 - The Unit is required
 - And the corollary

NYSDEC **EDP** Changes

- Enhanced Logic Checker
- Test Results QC
 - Result values of '0' are not allowed, unless the analyte is radiological data.
 - Samples with more than one test type cannot have reportable result = YES for the same analyte. {Exists in version 3}

NYSDEC Version 4 EDD Format

Changes per EDD Section

References to Small Date

- ▶ We are releasing version 4 of the EDD format
- ▶ We have also switched from Oracle to MS SQL.
- ▶ In the following, All references to Small Date
- ▶ Refer to the format for a date
 - Small Date = MM/DD/YYYY HH:MM (no seconds)
 - Full Date = MM/DD/YYYY HH:MM:SS

DataProvider_v4

- ▶ No changes to this section other than the name to version 4


Subfacility_v4

- ▶ The following fields are required:
 - Subfacility_code
 - Subfacility_type
 - Subfacility_name
 - Subfacility_task_code
 - Additional guidance provided in EDD manual to detail changes with respect to the content of each of these required fields

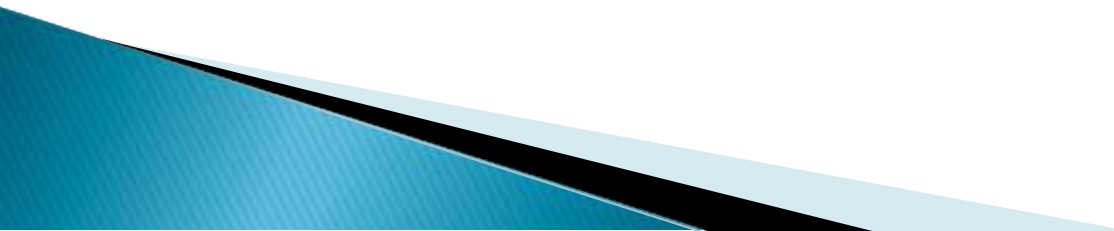
Subfacility_v4

- ▶ Subfacility_code populated with arbitrary number system determined by NYSDEC PM to match UIS project area/task/phase. Generally will contain a portion of the operable unit number but NYSDEC needs more than one subfacility record for different tasks worked on each subfacility.
 - Arbitrary House Number (for SVI investigations)
 - Related site number (for POET systems)
- ▶ Subfacility Type – Use valid values noting the type of subfacility such as AOC, BUILDING, DMM Pesticide County, LANDFILL, LAKE, DOUBLE CARBON FILTER, TRIPLE CARBON FILTER and SWMU from the rt_subfacility_type table.
- ▶ Subfacility Name – Complete a descriptive name of the subfacility which includes the operable unit number, phase, and task of the overall effort and task code such as “OU1 Phase 1 Onsite Soil Remediation” These values should be determined with input from the NYSDEC PM.
- ▶ Subfacility_task_code – Continue to use the list of valid values for subfacility_task_codes such as:
 - AREA WIDE
 - ONSITE
 - OFFSITE
 - SVI
 - GROUNDWATER
 - SITE MANGEMENT
 - POET
 - LEACHATE

Location_v4

- ▶ Valid Data_Provider code must be completed – Unknown not acceptable
 - ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ y_coord and X_coord renamed to Latitude and Longitude respectively similar to EPAR2 EDD Format (thus switching the order of these two fields from version 3).
 - ▶ 0,0 coordinates not acceptable – Must have coordinates in the bounding box of NY State.
 - ▶ Elevation Units must be in ft.
 - ▶ Horizontal and Elevation Accuracy Unit lists updated to include “Unknown” value.
- 

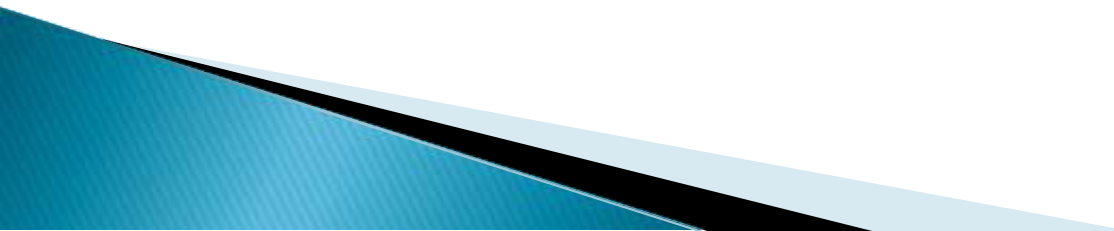
Location_v4

- ▶ SVI Location Types forced to use VI_Location_v4 EDD Section
 - ▶ Total Depth required for certain location types
 - ▶ Removed Well and Well Construction fields from Location_v4 EDD Section. Well_v4 and WellConstruction_v4 EDD sections must be used to submit well construction information.
- 

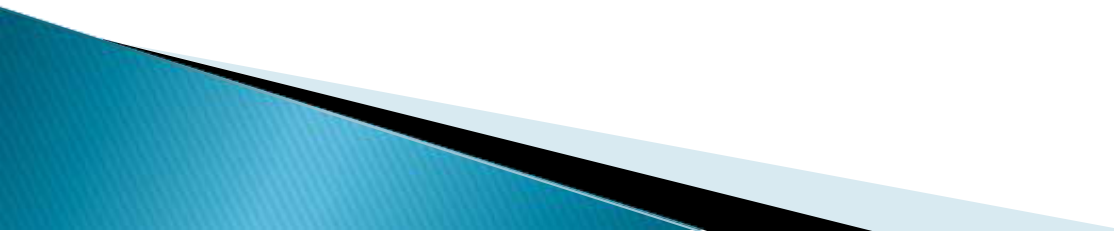
Files_v4

- ▶ **No Changes to this section.**
- ▶ NYSDEC is considering the types of additional files wanted from data providers to populate this section as the documents can link to EQuIS objects.

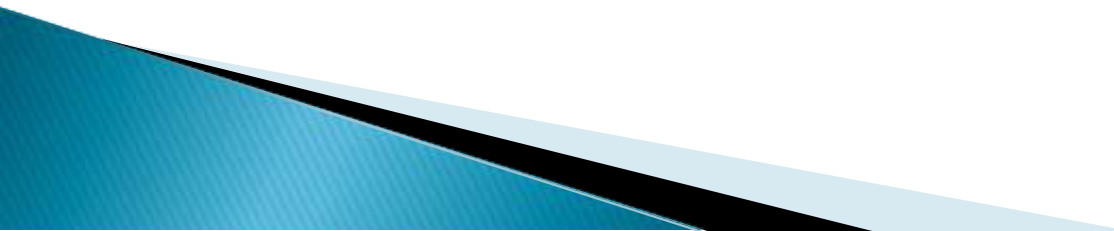
DrillActivity_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Diameter_unit changed to list of only inches, feet, millimeter, and centimeter.
 - ▶ Better guidance for populating Drill_Event values that describe the drilling event.
- 

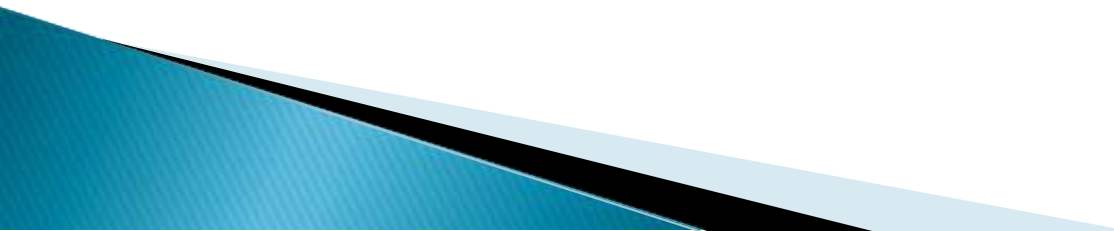
DownholePoint_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Additional guidance in EDD manual for data in this section includes the depth unit is assumed to be feet since there is no depth_unit in this EDD section.
- 

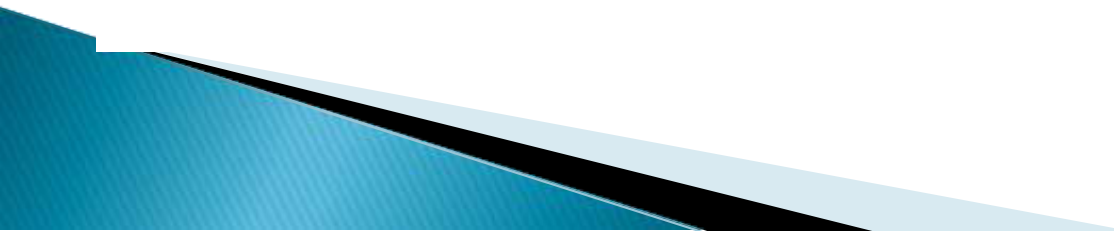
Lithology_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Additional geo_unit_code guidance to EDD Manual as defined in this presentation above.
- 

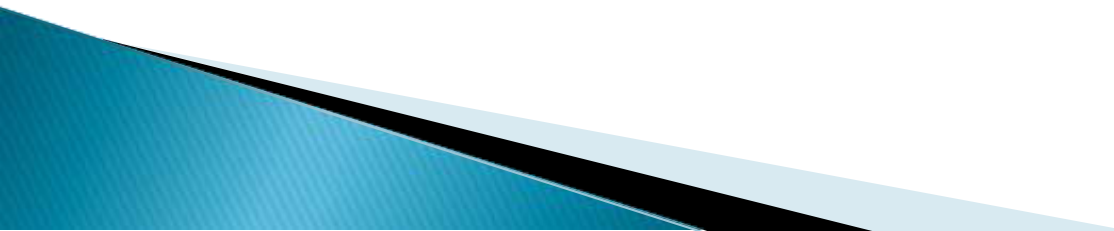
Well_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Dates to be changed to small date
 - ▶ Well status drop down list updated to 5 choice valid values
 - ▶ Top_casing_elev requirement removed unless well status is active.
 - ▶ Datum, stickup height, and sump measurements limited to feet.
- 

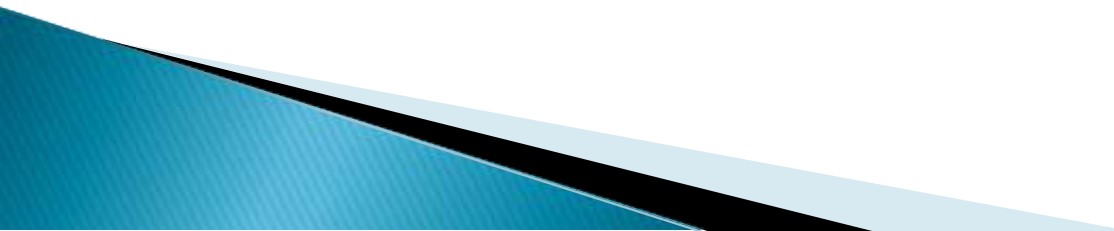
WellConstruction_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Depth units limited to ft.
 - ▶ Diameter and slot size unit limited to in, ft, mm, and cm
 - ▶ Thickness unit limited to in, ft, mm, cm, and m
- 

GeologySamples_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Moved the relative density value to the left of the density unit column
 - ▶ Sample_date changed to small date without seconds
- 

WaterTable_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Temperature unit lookup list shortened to just 'deg c', 'deg f', and 'deg k'
 - ▶ When temperature is populated temperature unit is required.
- 

WaterLevel_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
- ▶ Depth units limited to only feet.
- ▶ Field descriptions updated to better define population of Water Level EDD
- ▶ NOTE: Water Level is a FULL DATE format
 - MM/DD/YYYY HH:MM:SS

ExtractionInjectionWells_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.

SoilGas_v4

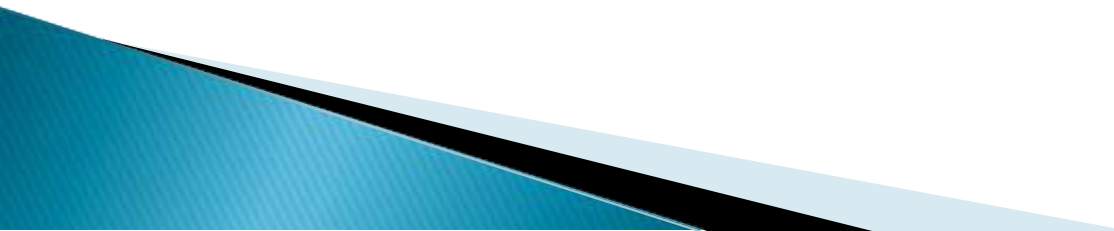
- ▶ New matrix code: AV = soil gas not assoc. w/ SVI
- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
- ▶ Moved the reading unit column just after the reading value
- ▶ Reading, reading unit, reading depth and depth unit are required fields now.
- ▶ Depth unit is now required and lookup list shortened to feet.

▶ Sampling method field is now required.


FieldResults_v4

- ▶ Special Characters prohibited from sys_loc_code and sys_sample_code save for the hyphen, underscore, and parenthesis.
- ▶ Depth unit required when depths are present and valid value list limited to 'ft' or 'in'

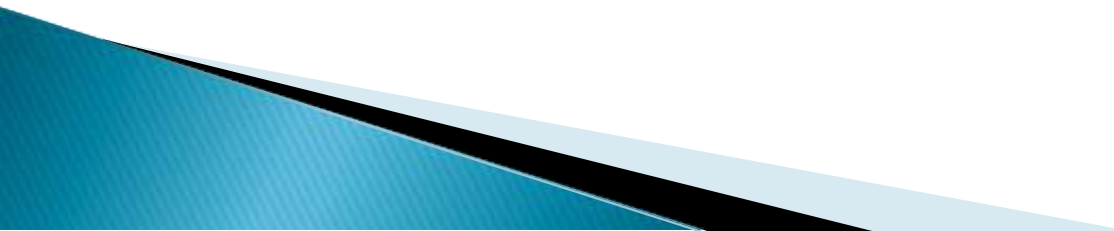
Sample_v4

- ▶ Special Characters prohibited from sys_loc_code and sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ **Sys_loc_code and sys_sample_code can't be the same**
 - ▶ Sys_sample_code and parent_sample_code can't match
 - ▶ Sample_date, sent_to_lab_date, and receipt_date no longer require seconds in time.
- 

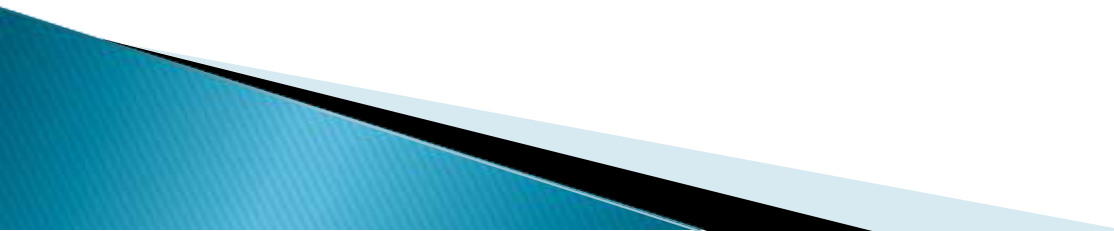
Sample_v4

- ▶ Sample matrix with matrix class = lab can't have sample type = N
 - ▶ Sample type of EB, FB, and TB can't have matrix code of WS, WG or SO and can't have a sys_loc_code
 - ▶ VI samples are forced to use VI_Samples_v4 EDD section based on matrix code AI or AO
 - ▶ Samples with source of LAB should have LB sample type code and *Q Sample Matrix
 - ▶ Samples with source of FIELD should have NF or FQ sample type class (from rt.matrix)
- 


Sample_v4

- ▶ Sample depths are required for sample types of SO and WG
 - ▶ Depth unit list limited to 'ft' or 'in'
 - ▶ Sampling_company_code linked to rt_company
 - ▶ sampling technique required when sample source = 'FIELD'
- 

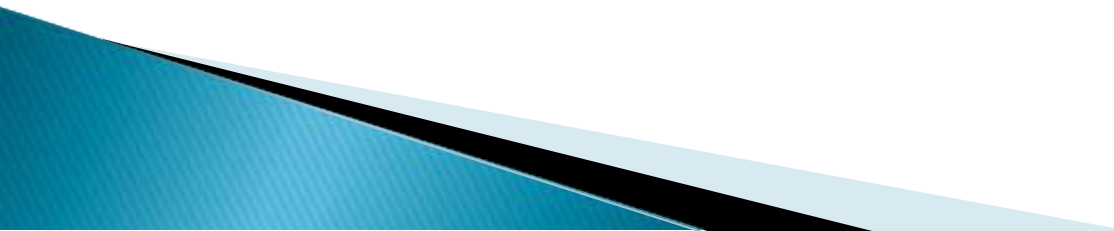
TestResultsQC_v4

- ▶ Special Characters prohibited from sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ Analysis date, leachate date, and prep_date all have seconds no longer needed similar to EPA Region 2 version 4 EDD format.
 - ▶ Preventing SVI data from using this table based on lab_matrix
 - ▶ Prep date can not precede sample date or come after analysis date.
 - ▶ Requiring Leachate Method and Leachate Date for when Fraction is TCLP.
 - ▶ Where values are present for result_value, sub_sample_amount and final_volume the respective unit fields are required. Also the reverse.
- 

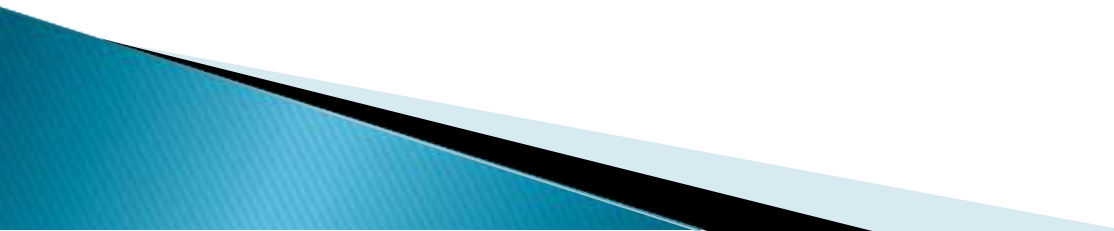
TestResultsQC_v4

- ▶ 0 result values are not allowed unless if it is radiological data
 - ▶ TICs require TIC Retention time and result_type must be TIC when TIC Retention Time is populated.
 - ▶ Validation level is required when validated Y_N is set to Y.
 - ▶ Result_Unit column moved next to result_value column.
 - ▶ Samples with more than one test type can't have reportable result = yes for the same chemical
- 

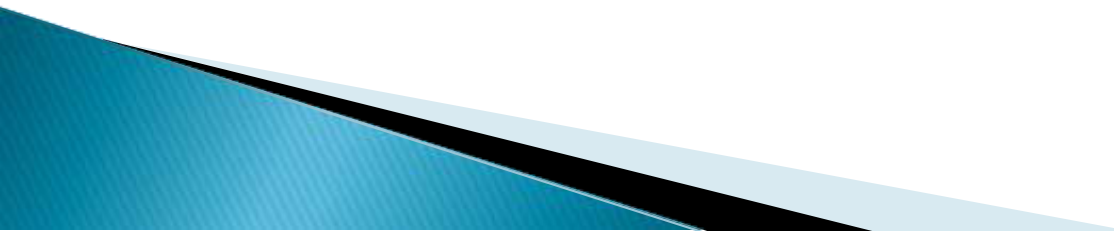
Batch_v4

- ▶ Special Characters prohibited from sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ Analysis date updated to no longer require seconds.
 - ▶ Minor edits made to field descriptions
- 

VI_Bldg_Address_v4

- ▶ The following fields are required:
 - Address1
 - City
 - State
 - Zipcode
 - Subfacility_name
 - Subfacility_task_code
- 

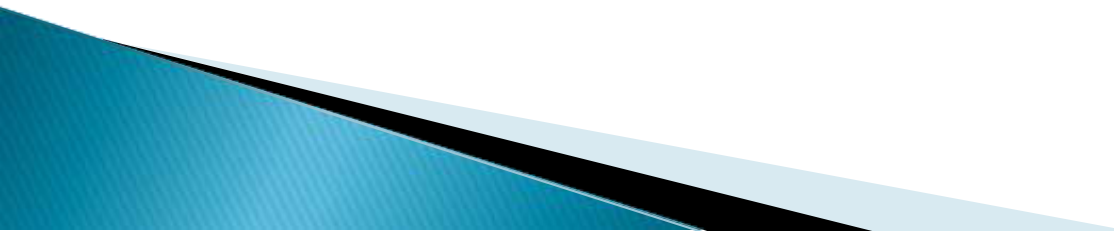
VI_Building_Inspection_v4

- ▶ Inspection date changed to Small Date and no longer requires seconds.
 - ▶ Building record must exist on VI_Bldg_Address table.
 - ▶ Foundation depth and foundation thickness unit lists shortened to only 'in', 'ft', and 'm'.
- 

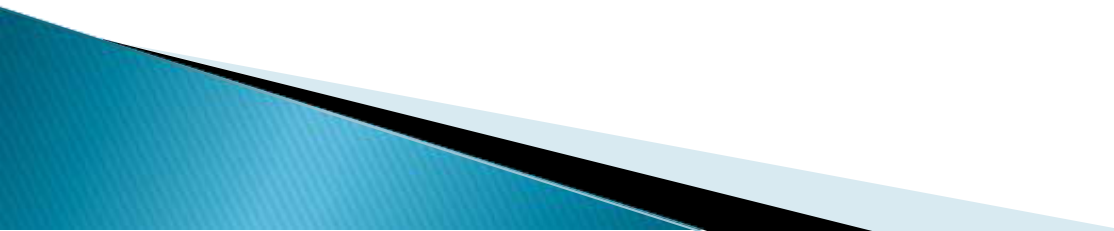
VI_Building_Parameters_v4

- ▶ Measurement date changed to Small Date and no longer requires seconds.
- ▶ Parameter unit lookup list limited to only VI building parameter unit types.

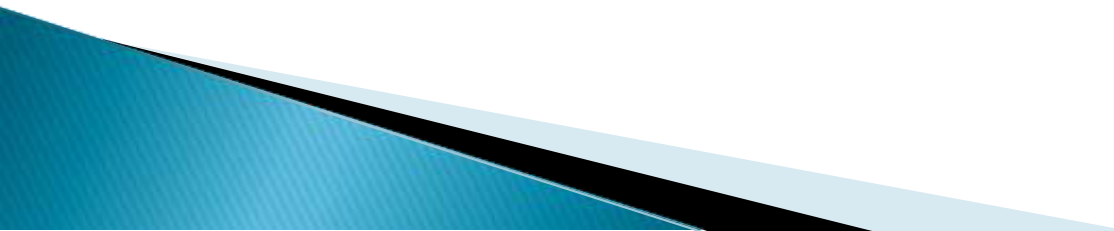
VI_Locations_v4

- ▶ Special Characters prohibited from sys_loc_code save for the hyphen, underscore, and parenthesis.
 - ▶ Valid Data_Provider code must be completed – Unknown not acceptable
 - ▶ y_coord and X_coord renamed to Latitude and Longitude respectively similar to EPAR2 EDD Format thus switching the order of these two fields.
 - ▶ 0,0 coordinates not acceptable – Must have coordinates in the bounding box of NY State.
 - ▶ Horizontal and Elevation Accuracy Unit lists updated to include “Unknown” value.
- 

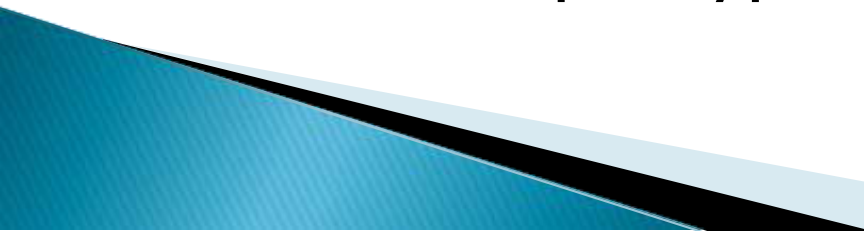
VI_Outdoor_Locations_v4

- ▶ Special Characters prohibited from sys_loc_code and sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ Building_loc_type_code only allows OUTDOOR location types
 - ▶ Building_code must be a valid building code on VI_Bldg_Address section
- 

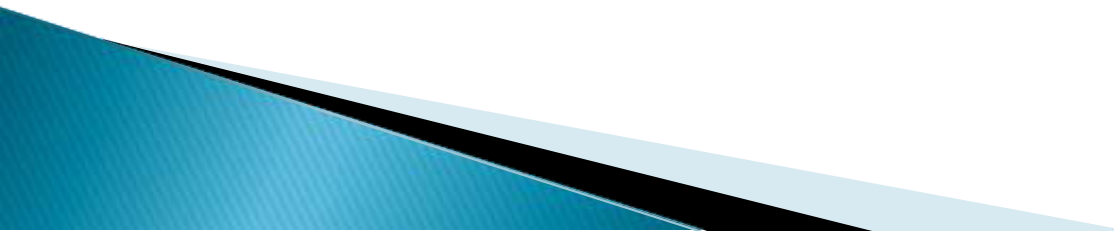
VI_Samples_v4

- ▶ Special Characters prohibited from sys_loc_code and sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ **Sys_loc_code and sys_sample_code can't be the same**
 - ▶ Sys_sample_code and parent_sample_code can't match
 - ▶ Sample_date, sent_to_lab_date, and receipt_date no longer require seconds in time.
- 


VI_Samples_v4

- ▶ Sample matrix with type lab (LB) can't have sample type N (normal)
 - ▶ Sample type of EB, FB, and TB can't have matrix code of WG or SO and can't have a sys_loc_code
 - ▶ Sample matrix options are only AI, AO, AS, and AQ
 - ▶ Samples with source of LAB should have LB sample type code and *Q Sample Matrix
 - ▶ Samples with source of FIELD should have NF or FQ sample type class (from rt.matrix)
- 

VI_TestResultsQC_v4

- ▶ Special Characters prohibited from sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ Analysis date, leachate date, and prep_date all have seconds no longer needed similar to EPA Region 2 version 4 EDD format.
 - ▶ Prep date can not precede sample date or come after analysis date.
 - ▶ Where values are present for result_value, sub_sample_amount and final_volume the respective unit fields are required. Also the reverse.
- 

VI_TestResultsQC_v4

- ▶ 0 result values are not allowed unless if it is radiological data
 - ▶ TICs require TIC Retention time and result_type must be TIC when TIC Retention Time is populated.
 - ▶ Validation level is required when validated Y_N is set to Y.
 - ▶ Result_Unit column moved next to result_value column.
 - ▶ Samples with more than one test type can't have reportable result = yes for the same chemical
- 

VI_Batches_v4

- ▶ Special Characters prohibited from sys_sample_code save for the hyphen, underscore, and parenthesis.
 - ▶ Analysis date updated to no longer require seconds.
 - ▶ Minor edits made to field descriptions
- 