eDATA Informatics Platform – The Basics

Brian Stringer
Proficiency Testing Technical Specialist

eDATA Informatics Platform – The Basics

- Key Learning Topics
  - Streamline data entry
  - Avoid common reporting errors
  - Submit results for a Quik Response
  - Access PT results
- Speaker – Brian Stringer
  - Proficiency Testing Technical Specialist

Avoid common errors by reviewing the paperwork

- **Review the packing slip**
  - Match up lot numbers with sample container labels
- **Before starting your analysis**
  - **Read the PT Tracker for important announcements and product changes**
  - **Read the instructions for the study (WS, WP, etc.)**
  - **Review the instruction page for each sample**
    - Storage requirements
    - Dilution instructions
    - Reporting information
  - **Review Data Reporting Forms**
    - **Concentration Ranges** are the manufacturing ranges for the analytes
    - PTRL (Proficiency Testing Reporting Limit)
    - The required **reporting units**, such as mg/L or µg/L
      - This can be different than what you routinely use in your laboratory

Avoid common errors reporting results

- Report results for the correct analyte
  - Demand (BOD or CBOD)
  - Solids (TSS, TDS or TS)
  - Microbiology – Wastewater Coliforms and SourceWater
    - **Reporting for Total Coliforms, Fecal Coliforms or E.coli?**
    - **Test method for Membrane Filtration (MF) vs. MPN-Multiple Well vs. MPN-Multiple Tube?**
  - Heterotrophic Plate Count and Enterococci also offer several options
- Report results from PT standards (WS, WP, DMR-QA, etc.) not from QC samples
  - Labels for PT standards have a green edge, list the study number and a lot number
  - Labels for QC samples have a blue edge, the name “QC”, and a lot number that matches the Certificates of Analysis you received with the samples
- **Report your results on time!**

Logging in to eDATA

- Go to www.eraqc.com and click on the blue “eDATA login” link at the top
- Then click the “ eDATA login ” button on the next screen
- If you have a **Username**, enter it along with your **Password**
- Don’t remember your password? Use the **Create/Reset ERA Password** on the right
- If you don’t remember your Username, are new to eDATA, or have any trouble logging in, just let us know and we can help
- **To update the contacts on your account, go to your customer number in the upper right, select Customer Information, then expand Contacts**

Updating contact information

Contacts

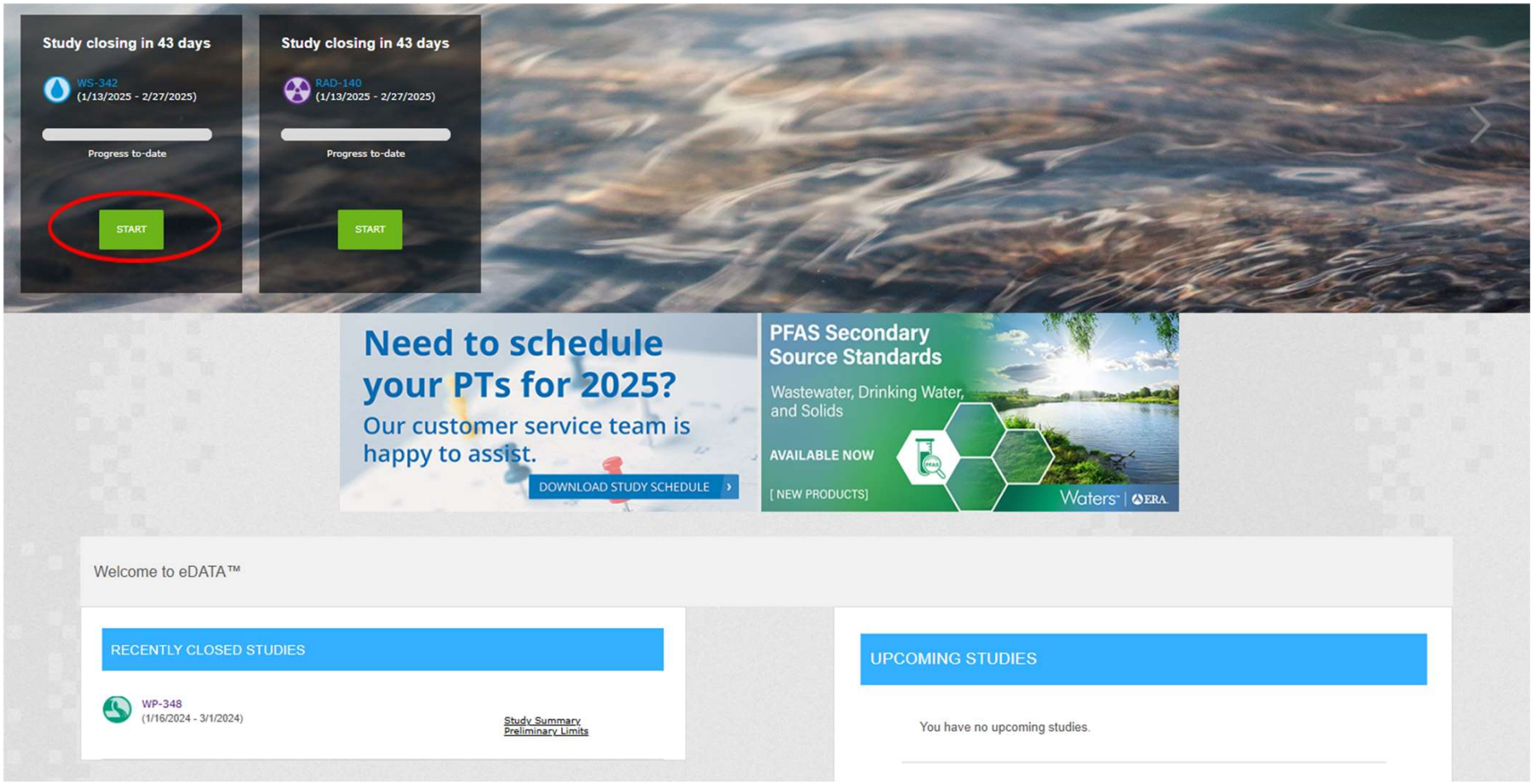
Collapse

Name	Title	Work Phone Number	Email Address	Primary	Role	Edit	Delete
Brian Stringer	Technical Specialist	(303) 431-8454	brian_stringer@waters.com	L	Administrator		
Anna Lyte	QA Officer	(800) 372-0122	interlabgroup@eraqc.com				
Lab Technician	Analyst		example@waters.com		Data Entry		

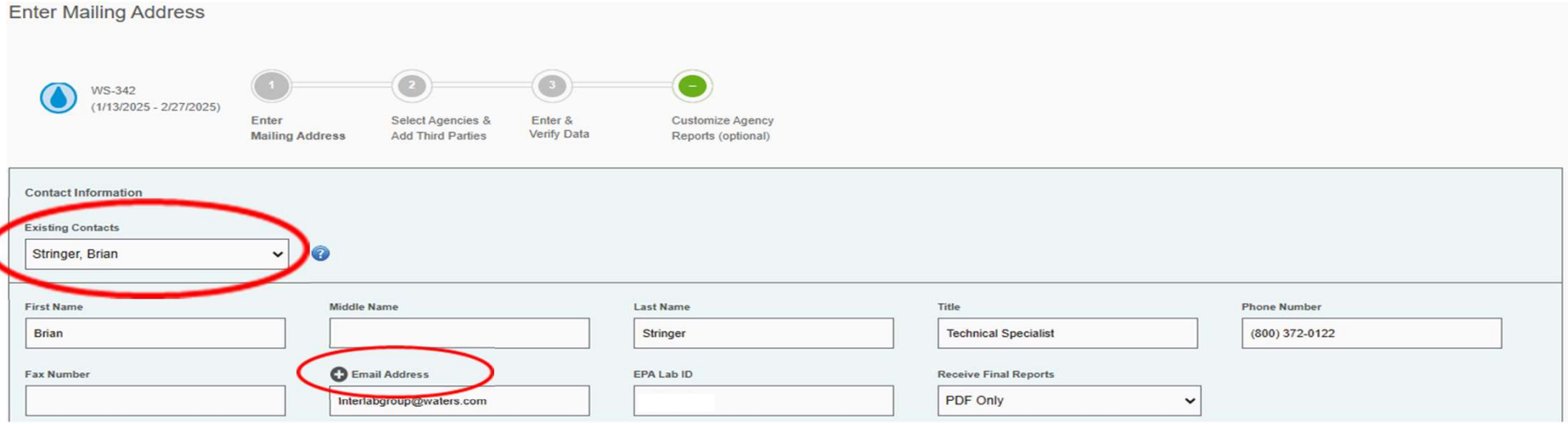
Add a new Contact

- Delete old contacts
- **Primary lab contact has the letter "L" under Primary**
- If the **Role** is empty, select the blue Edit pencil and enter a Username
  - We don't recommend using the customer number or your full email address
- Then choose a Permission Level (Role)
  - **Administrator** can enter data, retrieve reports, and delete or add contacts
  - **Data Entry** allows for data entry and reports, but can't change contacts
- Select Save, receive an email, follow the link to reset your password

eDATA Home Page

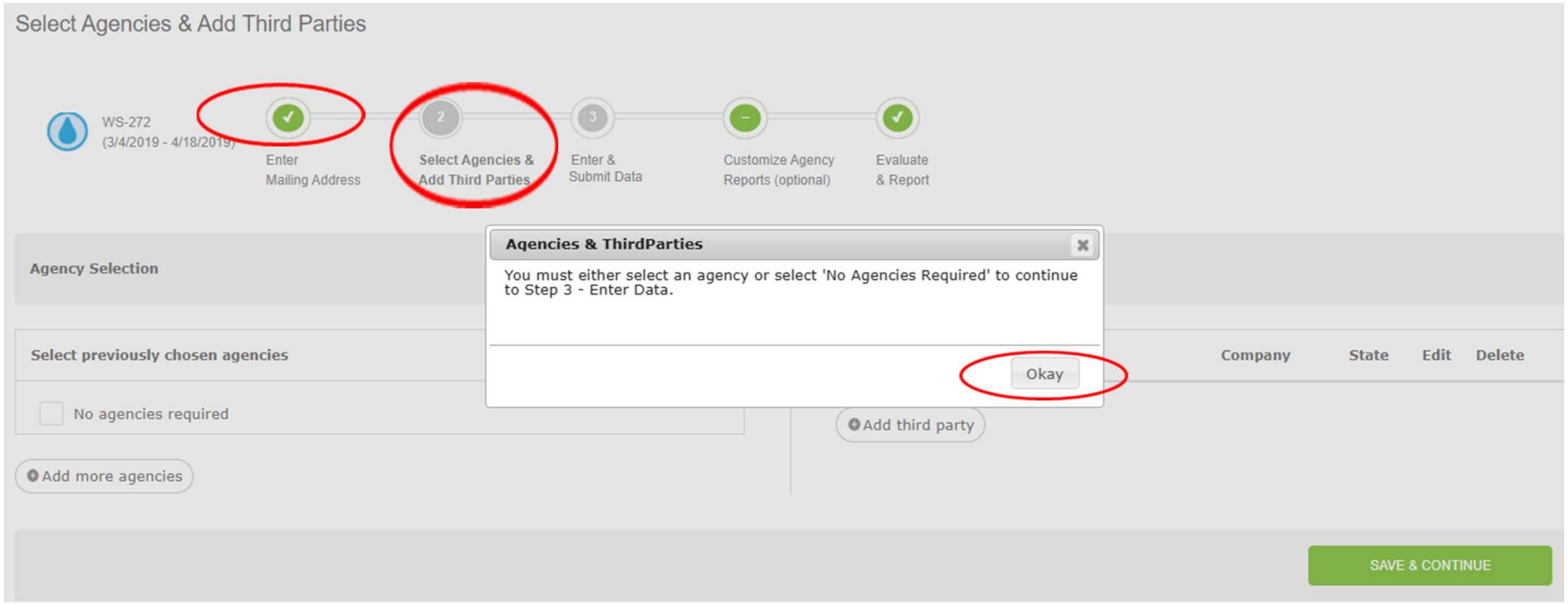


Step 1 – Verifying your information

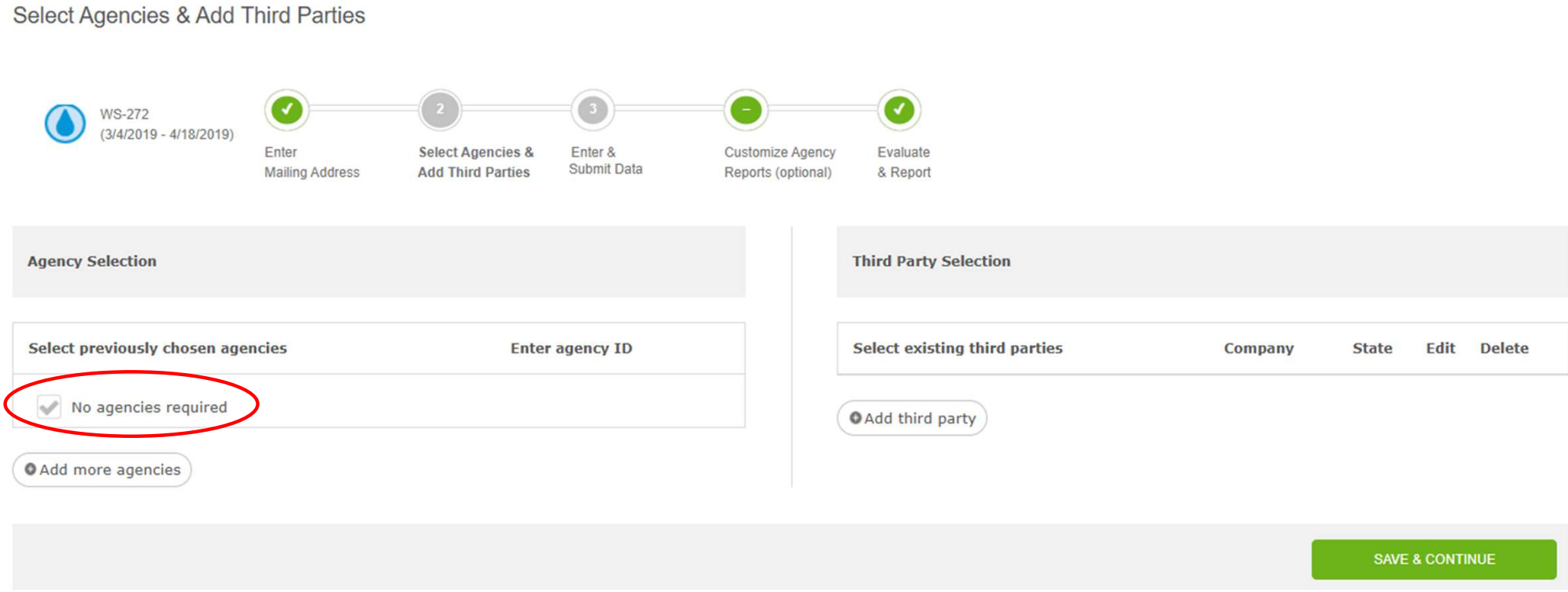


- Read the pop-up statement and answer “Okay”
  - Make changes for this contact, or select a different contact from the drop-down list
    - **To add a new contact, don’t overwrite the existing information.** Instead, go to your customer number in the upper right, select Customer Information, then Contacts, and “Add a new Contact”
  - **Add additional report recipients from your contact list by selecting ⊕Email Address,** find the person in the drop-down list, select Add, and then Close
  - When done, click the green “**Save & Continue**” button

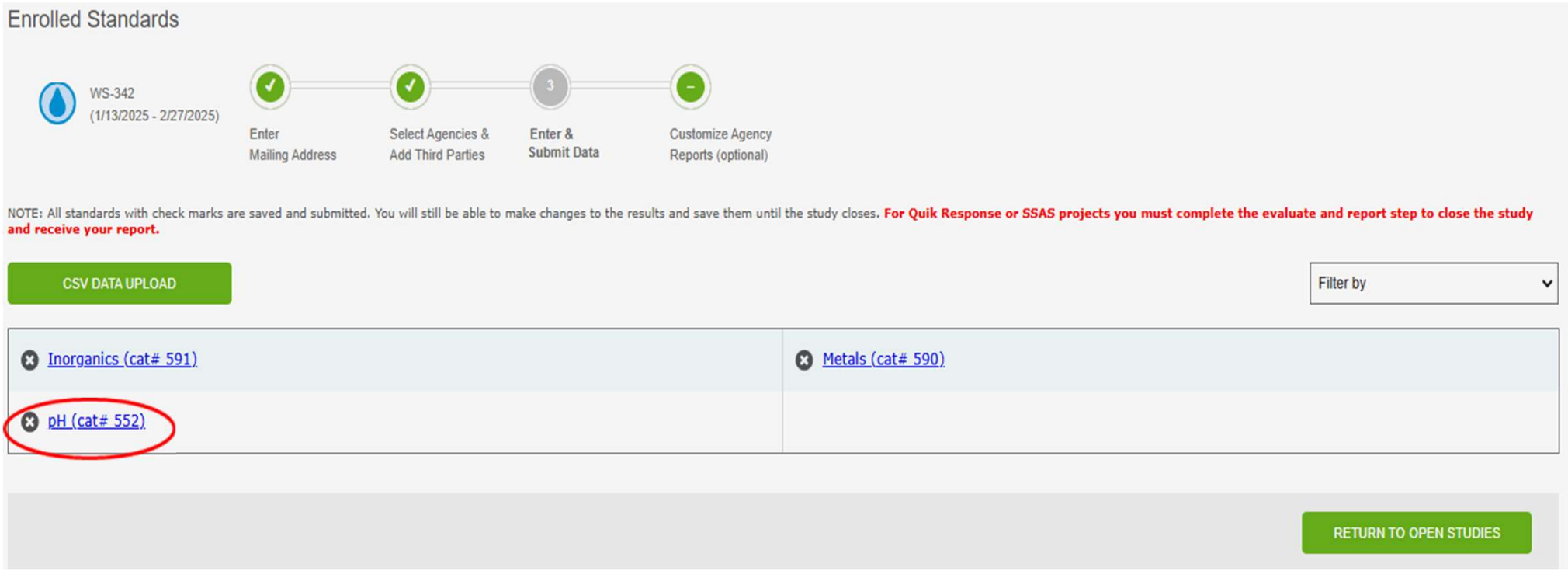
Step 2 – Agencies & Third Parties



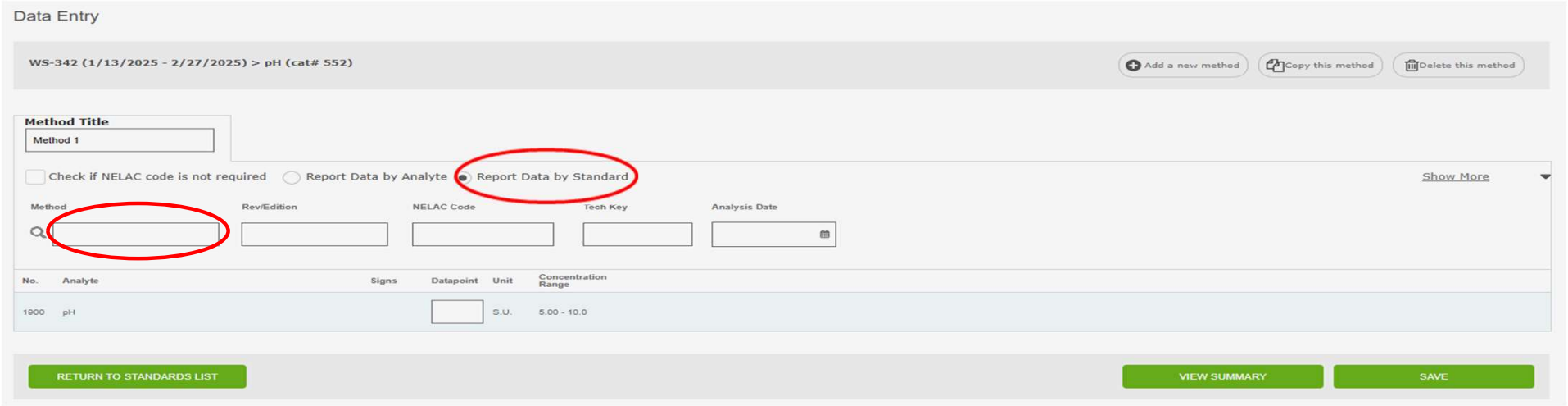
Step 2 – Agencies & Third Parties



Step 3 – Enter & Submit Data



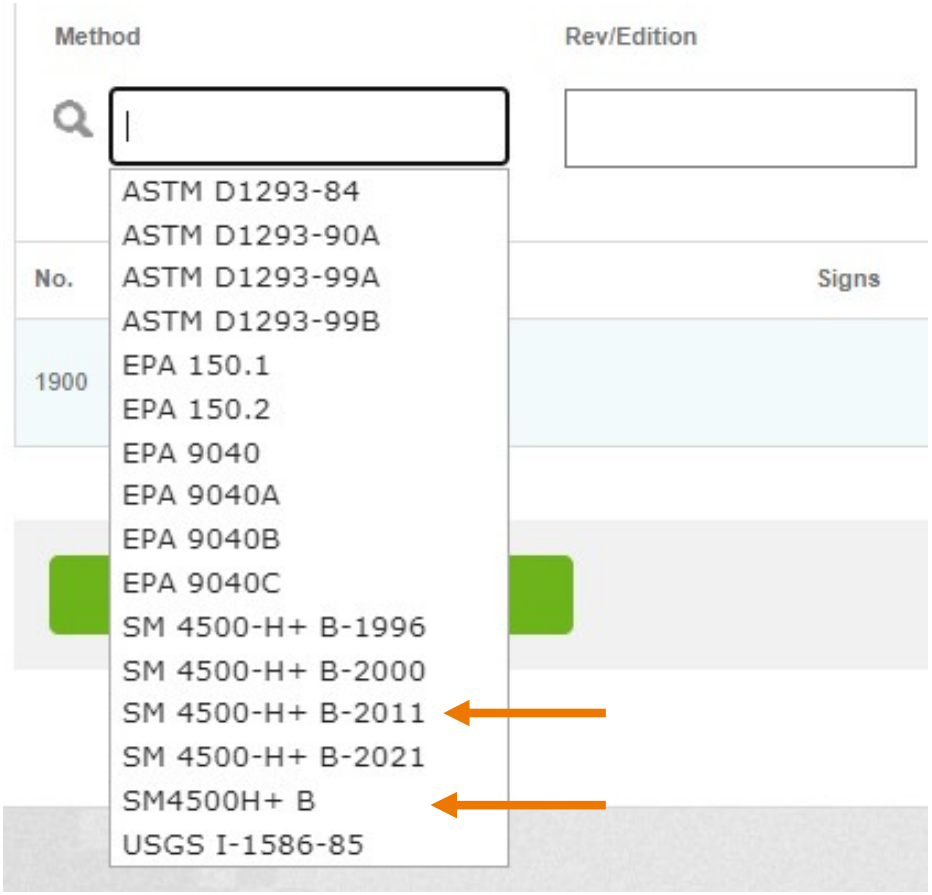
Data Entry – Report Data by Standard



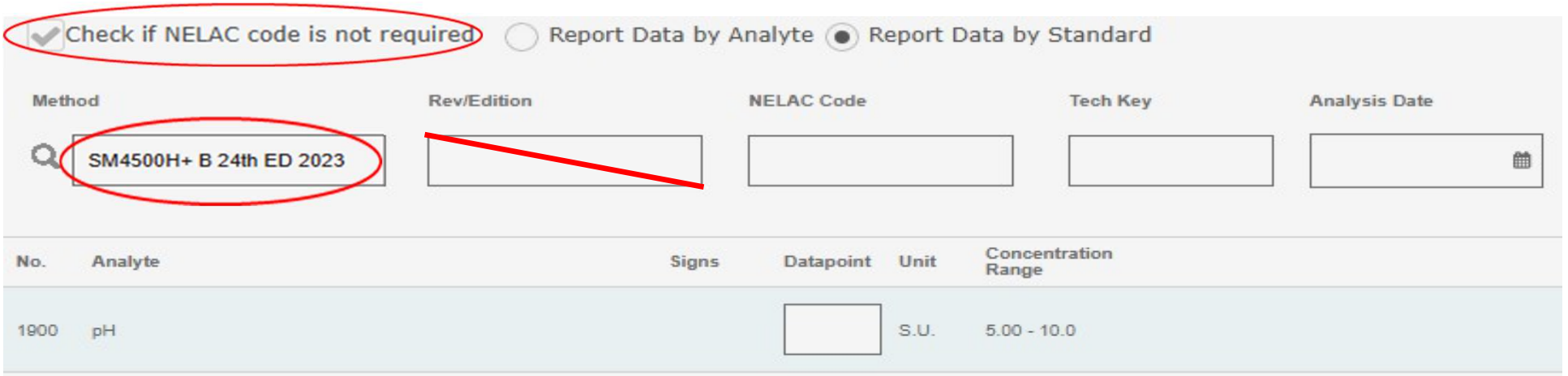
- On this data entry screen:
  - Method and Analysis Date are at the top, as they apply to all analytes in the standard
  - This is noted as “Report Data by Standard”
  - Can be changed to “Report Data by Analyte” to enter different information for each analyte
  - “Method Title” is only used to keep track of multiple method tabs
- **Start by clicking in the empty box under “Method”**

Data Entry – Standard Methods

- Scroll or start typing to narrow down the search
- Standard Methods (SM) are listed two different ways
  - Pick the method with the revision year
    - Such as **SM 4500-H+ B-2011**
    - There is a space between SM and 4500
    - Revision year 2011 is also listed in the Rev/Edition box, but won't be on the report
  - Or pick the method without the year
    - Such as **SM4500H+ B**
    - There is not space between SM and 4500
    - Rev/Edition shows "online" or an addition number
    - **The Rev/Edition information will not appear on your final report**

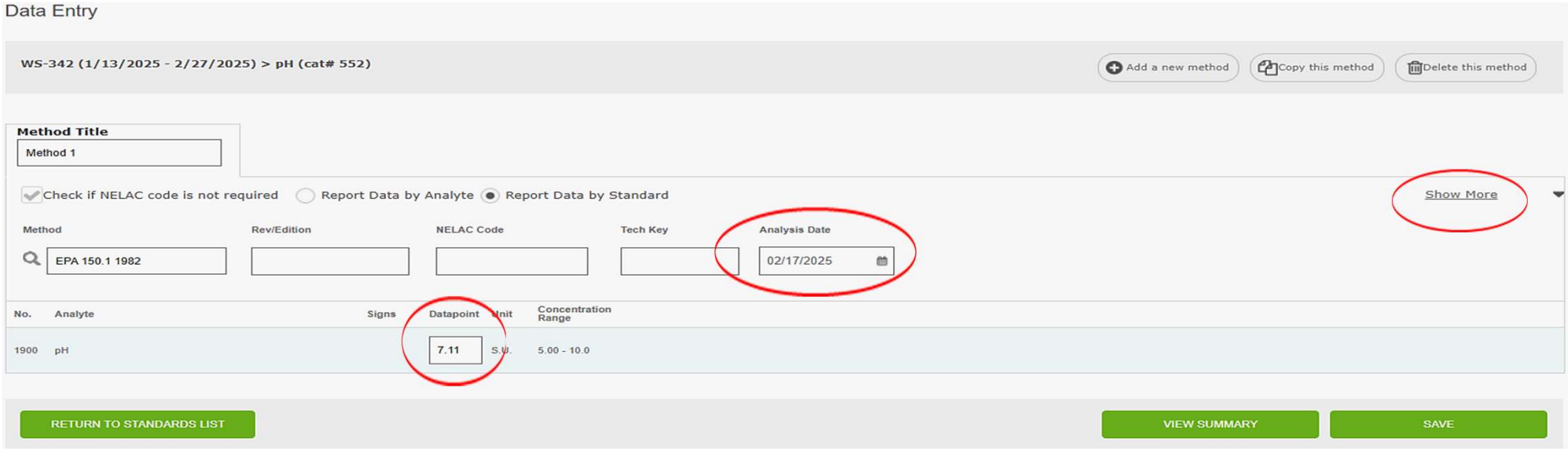


Data Entry – Enter Complete Method Description



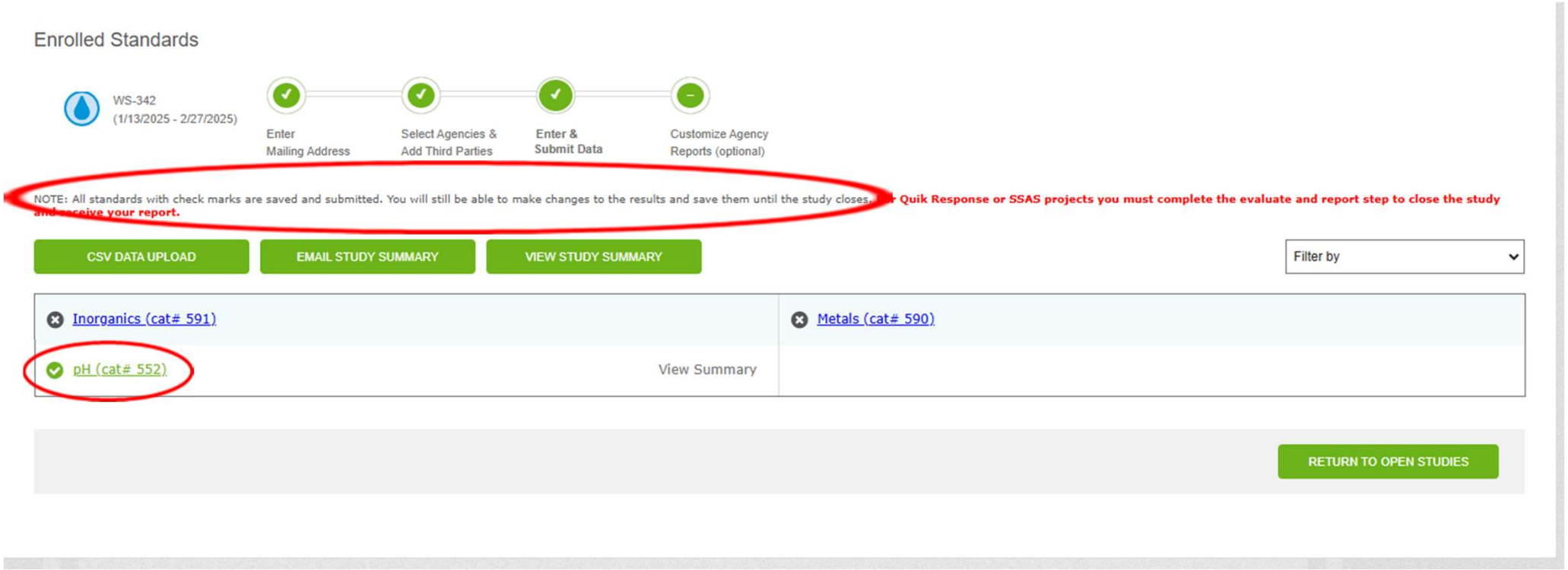
- Enter **all method information** in the box labeled “Method”
  - This includes any **method revisions or editions**
  - Can also include **preparatory, extraction, or digestion methods**
  - Please note, any information in the “Rev/Edition” box will **not** appear on the final report
  - If you enter your own method information, just **check the small box labeled “Check if NELAC code is not required”**

Data Entry – Analysis Date, Datapoint & Analyst Name

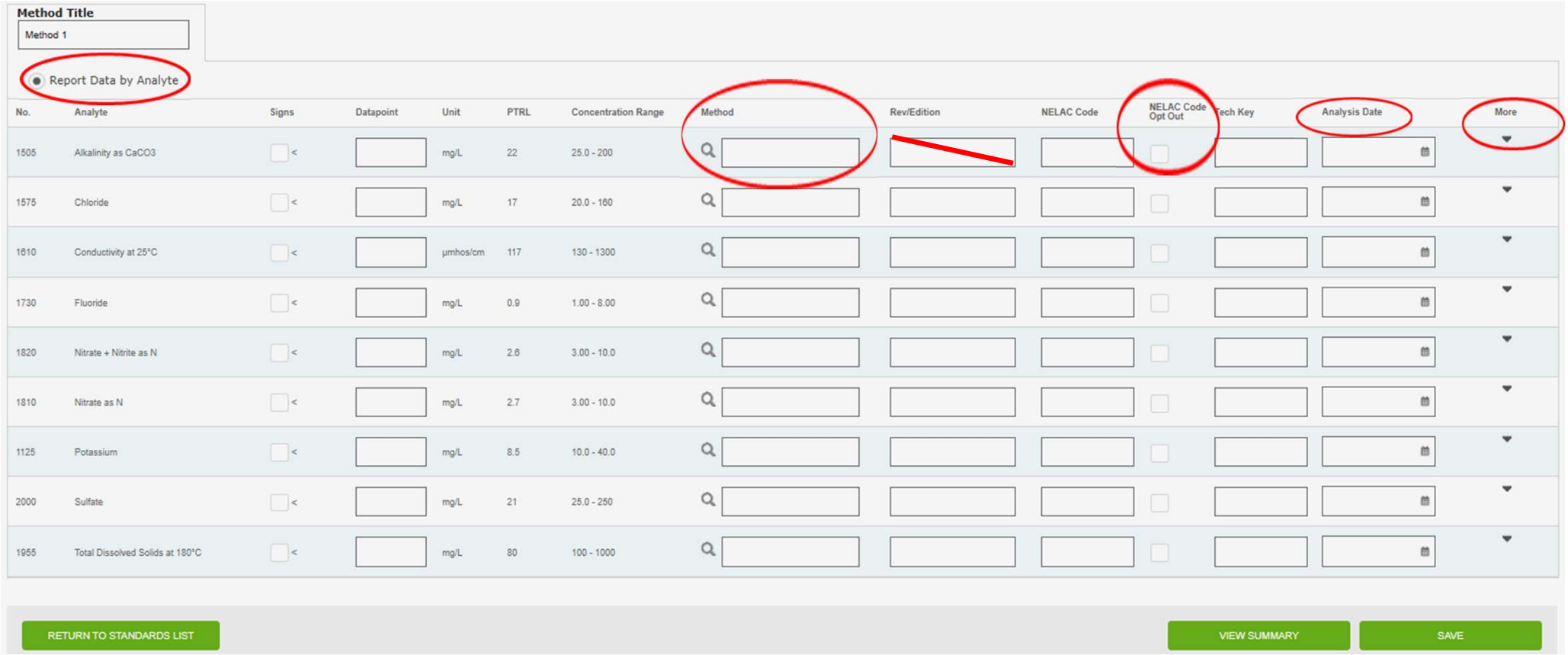


- Pick the **Analysis Date** using the calendar
- To report your analyst's name:
  - Select **Show More** on the right and find the "**Analyst Name**" field
- Enter your test results in the **Datapoint** field
- Select Save and answer Yes to "Do you want to go to the list of Standards"

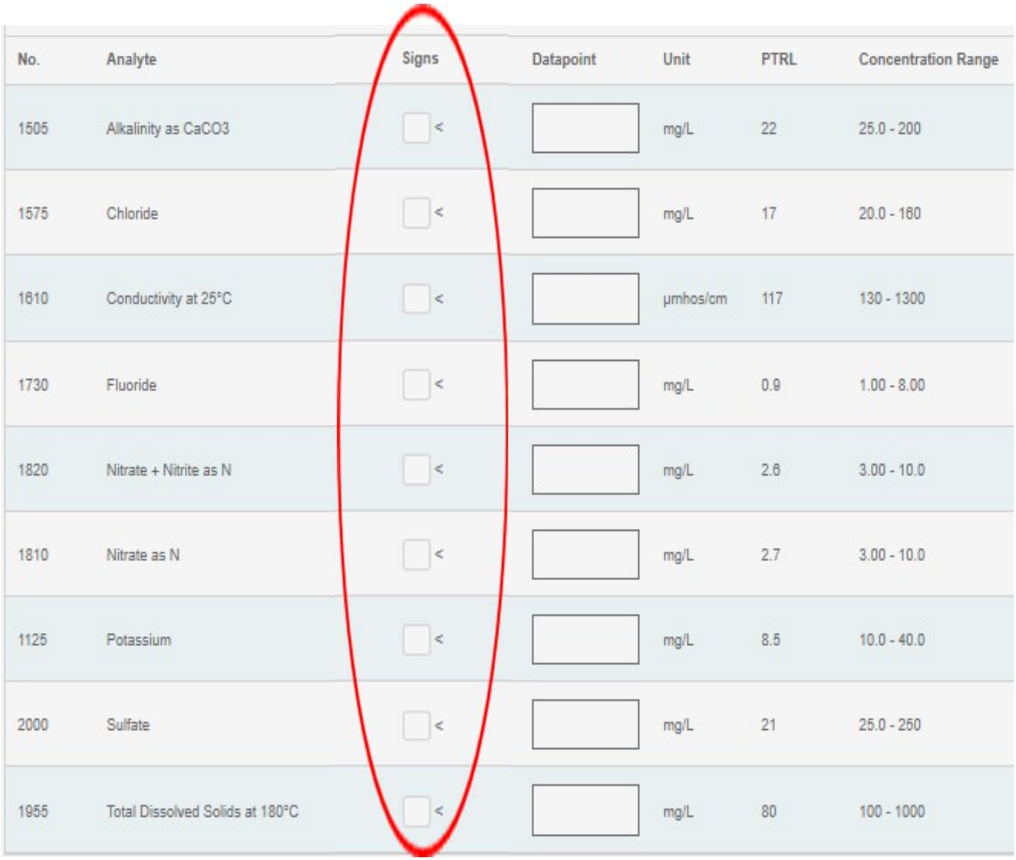
Data Entry – Enrolled Standards List



Data Entry – Report Data by Analyte



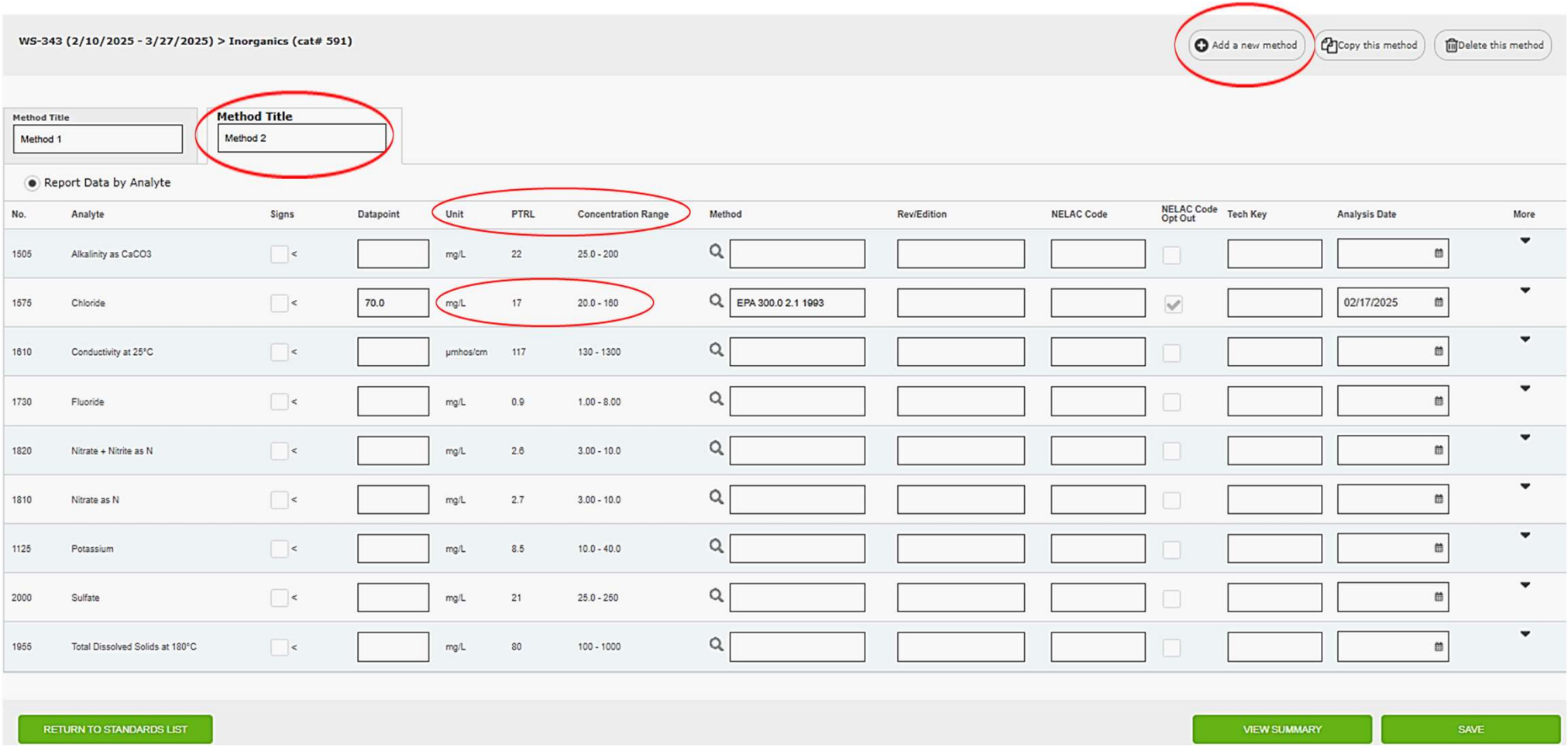
Data Entry – Less Than Signs “<“



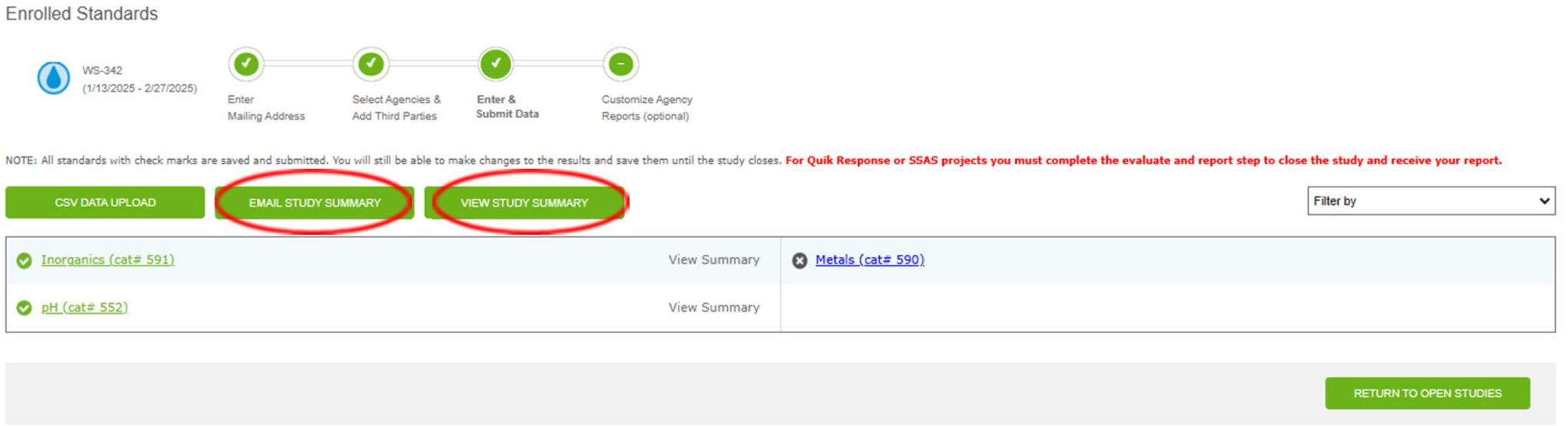
No.	Analyte	Signs	Datapoint	Unit	PTRL	Concentration Range
1505	Alkalinity as CaCO3	<		mg/L	22	25.0 - 200
1575	Chloride	<		mg/L	17	20.0 - 160
1610	Conductivity at 25°C	<		µmhos/cm	117	130 - 1300
1730	Fluoride	<		mg/L	0.9	1.00 - 8.00
1820	Nitrate + Nitrite as N	<		mg/L	2.6	3.00 - 10.0
1810	Nitrate as N	<		mg/L	2.7	3.00 - 10.0
1125	Potassium	<		mg/L	8.5	10.0 - 40.0
2000	Sulfate	<		mg/L	21	25.0 - 250
1955	Total Dissolved Solids at 180°C	<		mg/L	80	100 - 1000

- Note: Below the word “**Signs**” are less-than signs “<“ with small boxes
  - **The boxes are <u>not</u> used to show you reported results for the analyte**
  - **They are <u>only</u> checked to indicate you were not able to detect the analyte**
  - Mostly for Organics standards where not every analyte is spiked in every round
- If you do want to report that an analyte was not spiked into a standard
  - Check the box by the < sign and enter a numerical value for the Datapoint, such as the PTRL value, or your own LOQ (Limit of Quantification)
  - You can also enter a value of 0 (zero) for the Datapoint, and don’t check the < Sign

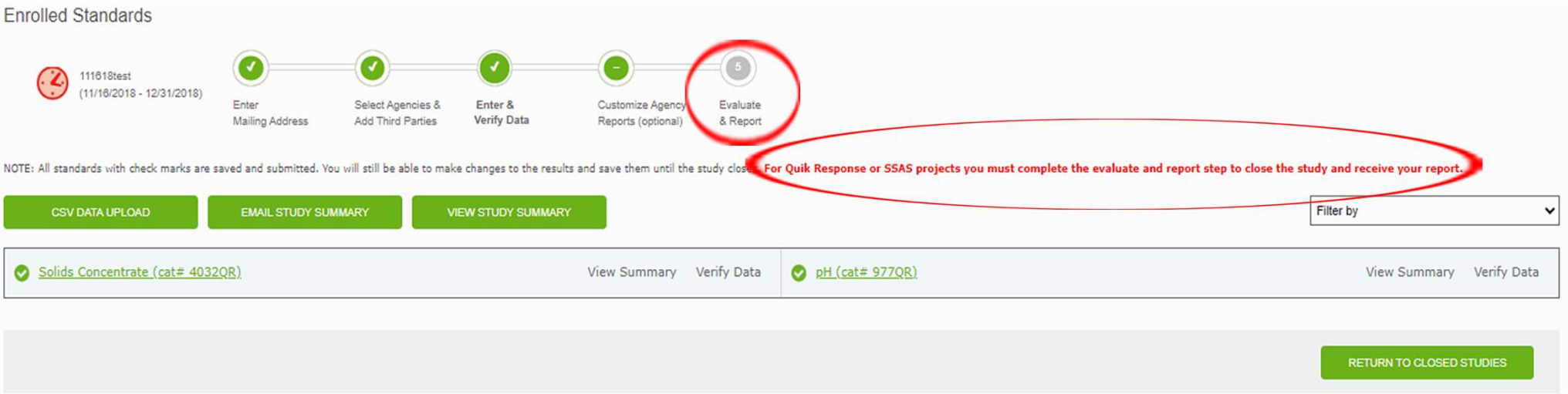
Data Entry – Review & Save



Data Entry – Enrolled Standards List

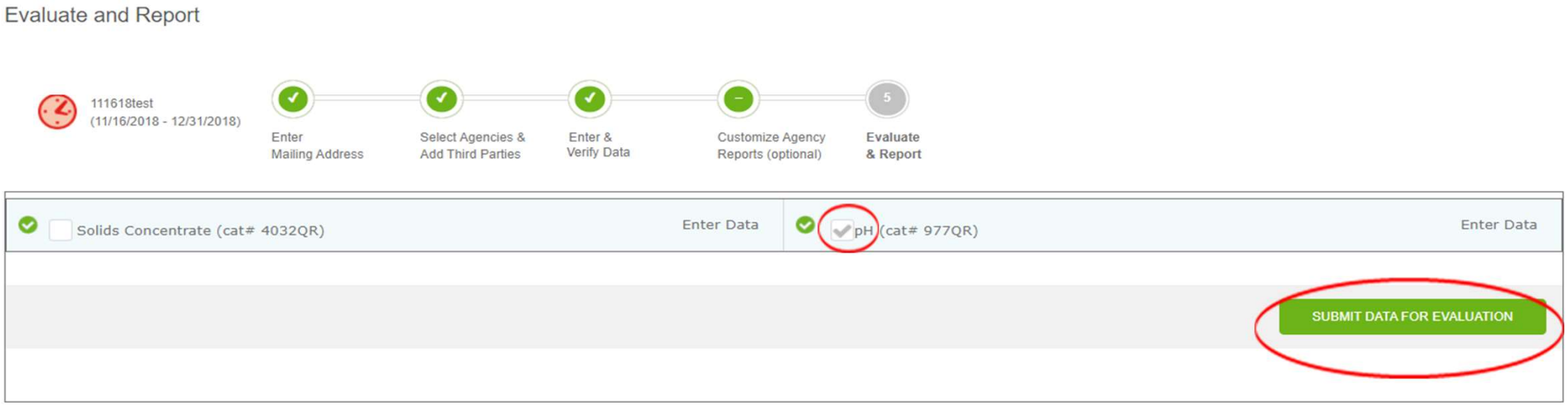


Quick Response Studies



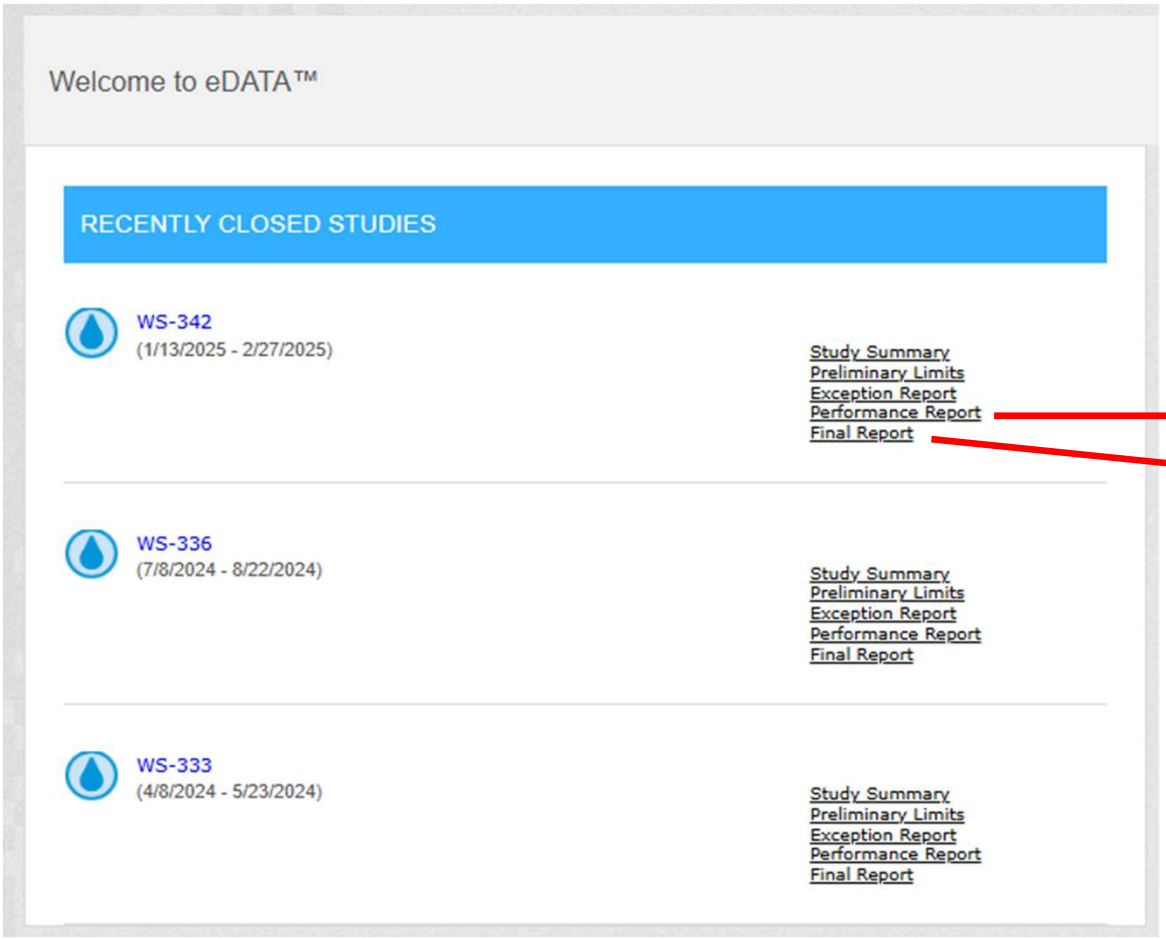
- Quick Responses are different than regular studies
- You are in control of the close date for Quick Responses
- Just tell us when you're ready to submit your results
  - Enter and save your results
  - Review the study summary
  - **Go to Step 5 – Evaluate & Report**

Submitting Quick Response Results



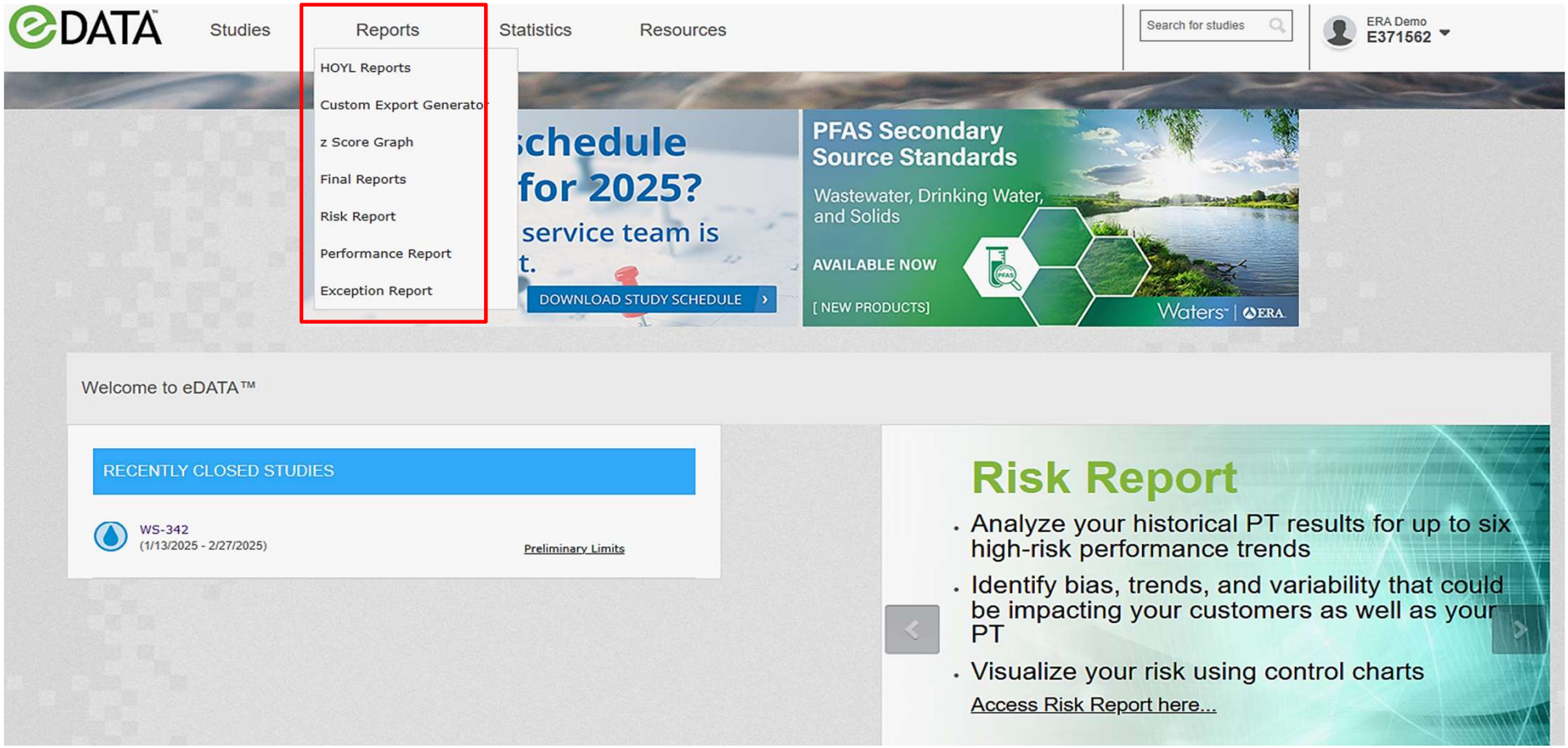
- **Check the box for any standard you're ready to submit**
  - You don't have to submit all standards at once
    - Just let us know if you need us to send a partial report to your agencies
  - But you can't go back and submit results for additional analytes within a standard
- **Select the button Submit Data for Evaluation**
- Your graded report will be ready in seconds

Retrieving your graded results

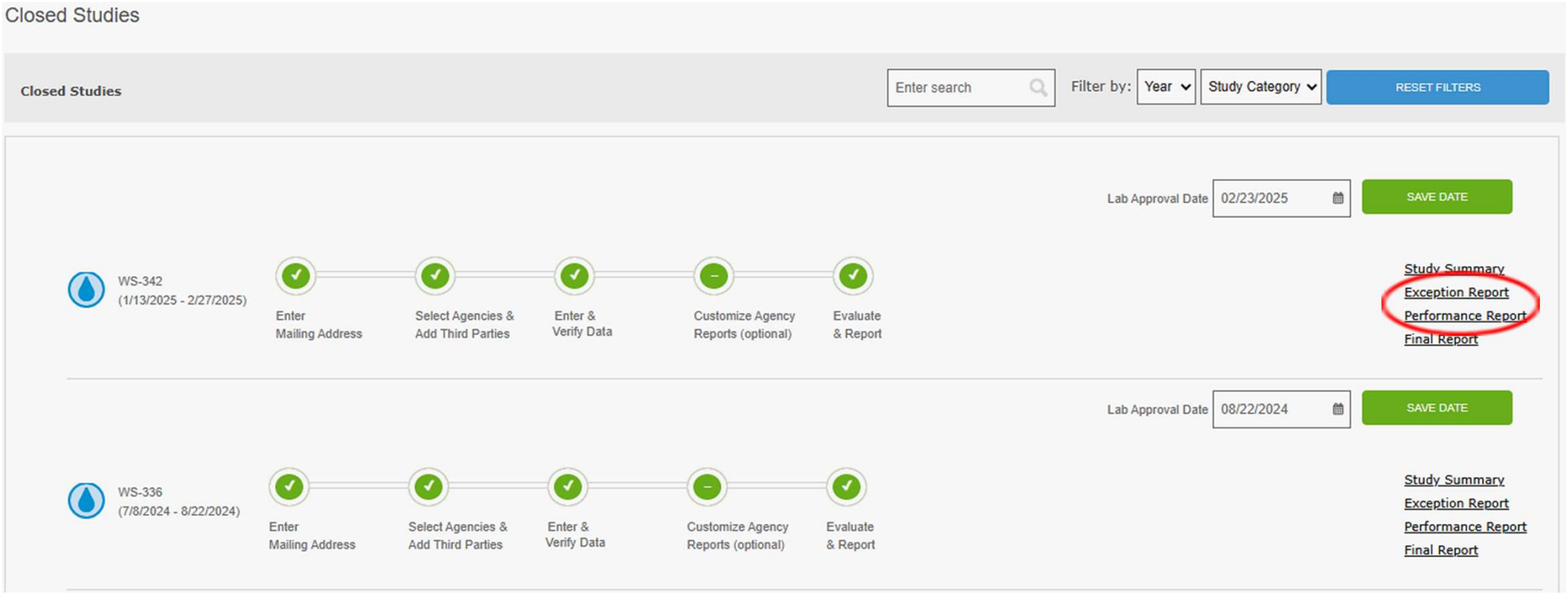


Study Summary
Preliminary Limits
Exception Report
Performance Report
Final Report

Reports and tracking tools



Closed Studies



Performance Report for historical studies

ADD STUDIES | CLEAR STUDIES

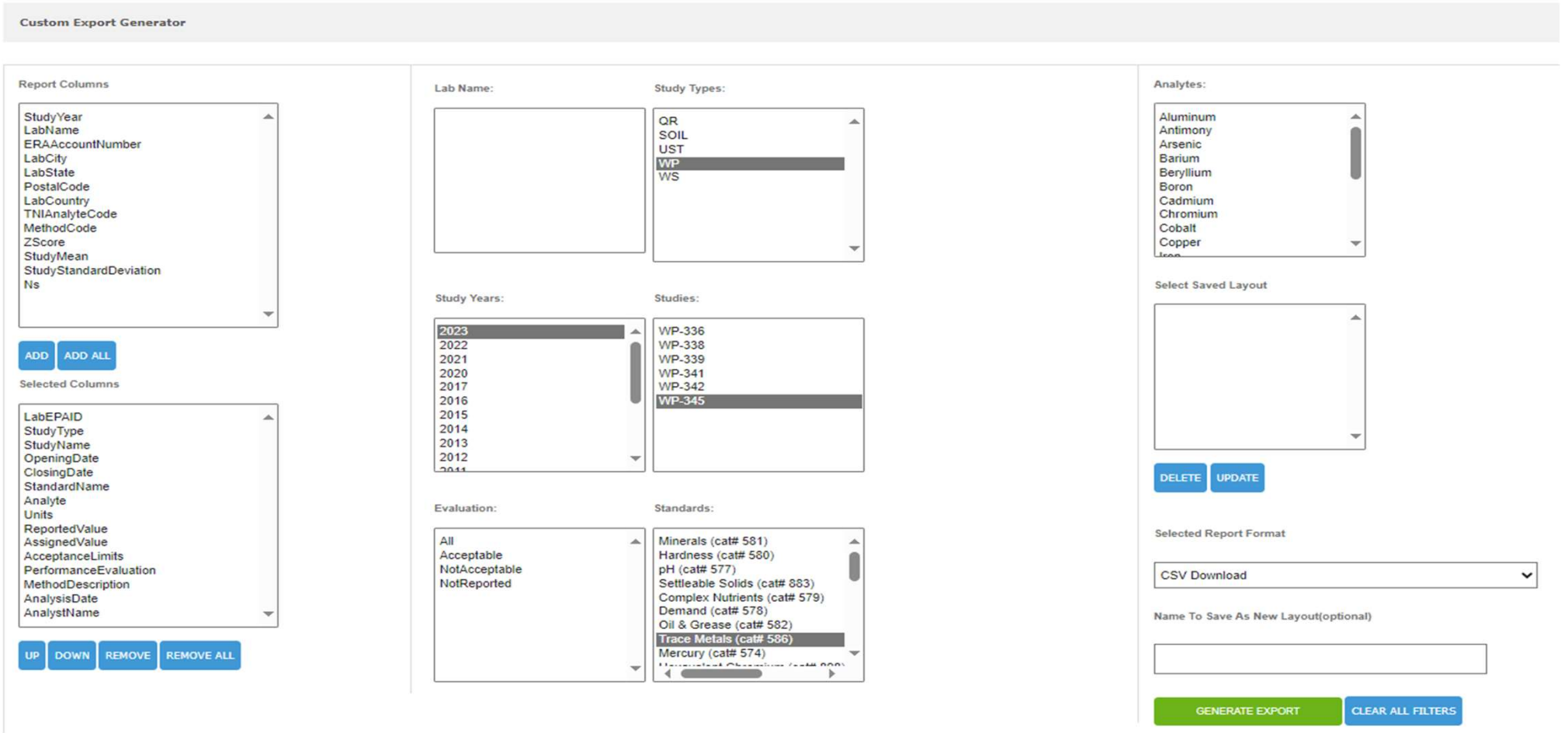
Performance Report - All 2024 WP,All 2024 WS,All 2024 SOIL

Evaluation Criteria: TNI 2016 Show SOP:

Study	TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Z Score	Method Description	Analysis Date	Analyst Name	Study Mean	Study Standard Deviation
							ALL	ALL					
Nitrite													
Z000057F	1840	Nitrite as N	mg/L	0.443	0.442	0.376 - 0.508	Acceptable	-0.105	EPA 353.2 2 1993	1/9/2024	Ana Lyst33	0.446	0.0269
Inorganics													
Z000057F	1820	Nitrate + Nitrite as N	mg/L	5.72	5.99	5.09 - 6.89	Acceptable	-1.18	EPA 353.2 2 1993	1/4/2024	Ana Lyst33	6.04	0.268
Z000057F	1810	Nitrate as N	mg/L	5.72	5.99	5.39 - 6.59	Acceptable	-1.17	EPA 353.2 2 1993	1/4/2024	Ana Lyst33	6.01	0.250
Diesel Range Organics (DRO) in Water													
Z000002J	9369	Diesel Range Organics (DRO)	µg/L	1880	3780	949 - 4750	Acceptable	-1.33	CT ETPH 1 2005	1/25/2024	Ana Lyst32	2780	677
Nitrite													
Z000056E	1840	Nitrite as N	mg/L	3.74	3.77	3.27 - 4.27	Acceptable	-0.235	EPA 353.2 2 1993	1/9/2024	Ana Lyst33	3.78	0.153
Diesel Range Organics (DRO) in Soil													
Z000001I	9369	Diesel Range Organics (DRO)	mg/kg	809	1650	428 - 2000	Acceptable	-1.59	CT ETPH 1 2005	1/25/2024	Ana Lyst32	1210	254
Simple Nutrients													
Z000056E	1820	Nitrate + Nitrite as N	mg/L	5.66	5.94	4.89 - 6.94	Acceptable	-0.382	EPA 353.2 2 1993	1/4/2024	Ana Lyst33	5.84	0.464
Z000056E	1810	Nitrate as N	mg/L	5.65	5.94	4.83 - 7.02	Acceptable	-0.455	EPA 353.2 2 1993	1/4/2024	Ana Lyst33	5.92	0.592
Metals in Soil													

EXPORT REPORT

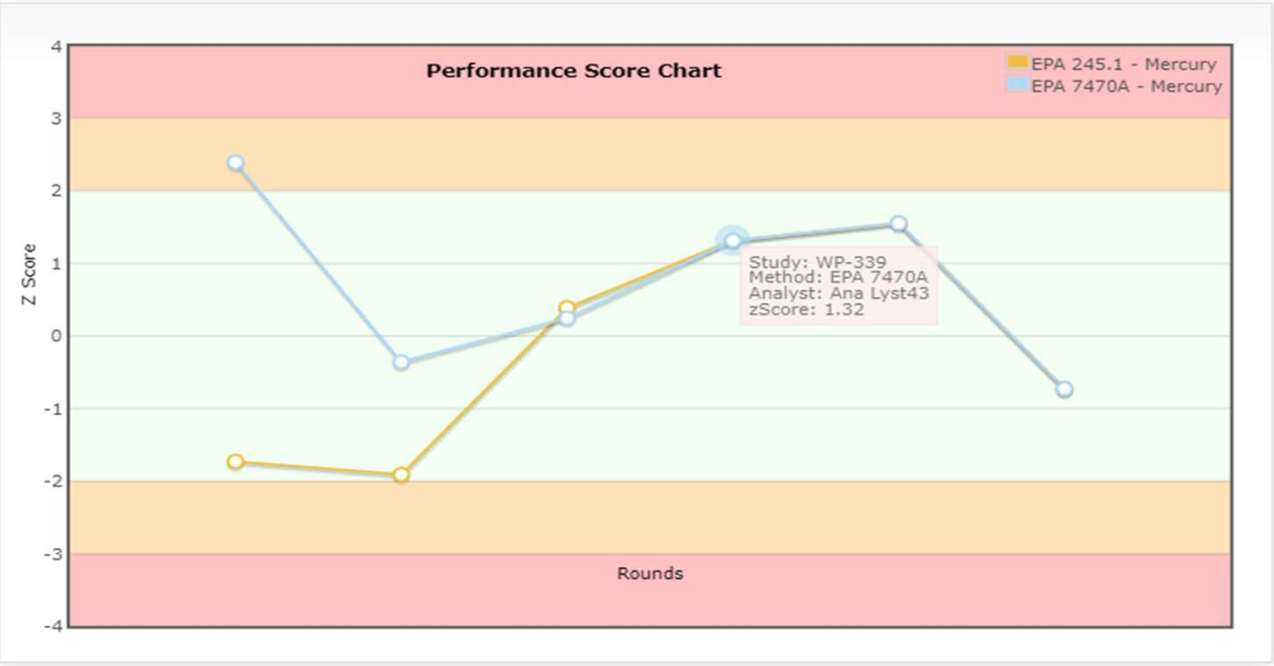
Custom Export Generator



Z-Score Graph

Waters™ | ERA

Chart Type: z-Score
Begin Date: 01/17/2022
End Date: 01/17/2025
Scheme: WP
Standard: Mercury
Analyte: Mercury
Analyst: All
Method: EPA 245.1, EPA 7470A
ADD TO CHART



Risk Report

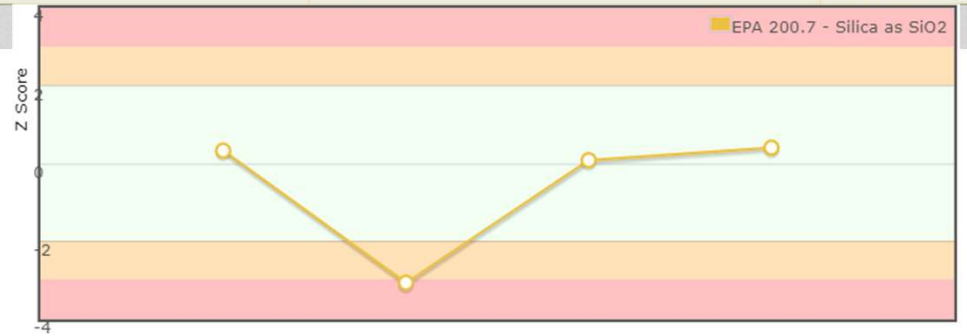
The use of multi-rule examination of zScores for historical PT results is intended to aid the reviewer identify possible areas of concern for further investigation in regards to bias, variability and trends in your PT data and are not intended to represent performance criteria for the evaluation of PT data.

L1of5 > 3SD : One or more of the last 5 data points was outside of 3 standard deviations
L2of3 > 2SD : 2 of the last 3 data points were both outside 2 standard deviations on the same side of the mean
L3 > 1SD : The last 3 data points were outside 1 standard deviation on the same side of the mean
L5x : The last 5 data points were all on the same side of the mean
L3 : The last 3 data points all trend in the same direction
L5 : The last 5 data points all trend in the same direction

Filter by: Matrix: WS Date Range: 01/17/2022 — 01/17/2025 Flag: Selected Flags

Matrix	Standard	Method Description	Analyte	Flag
				ALL
WS	Metals	EPA 200.7	Thallium	L1of5 > 3SD L2of3 > 2SD
WS	Metals	EPA 200.8	Arsenic	L1of5 > 3SD L2of3 > 2SD
WS	Metals	EPA 200.8	Chromium	L1of5 > 3SD
WS	Metals	EPA 200.8	Molybdenum	L1of5 > 3SD
WS	Metals	EPA 200.8	Nickel	L1of5 > 3SD
WS	Metals	EPA 200.8	Selenium	L1of5 > 3SD L2of3 > 2SD
WS	Metals	EPA 200.8	Vanadium	L1of5 > 3SD
WS	Inorganics	SM2510B	Conductivity at 25°C	L1of5 > 3SD
WS	Inorganics	SM2540C	Total Dissolved Solids at 180°C	L1of5 > 3SD
WS	Silica	EPA 200.7	Silica as SiO2	L1of5 > 3SD

EXPORT RISK REPORT



HOYL Reports

Waters™ | ERA

Health of your Lab(s) [International Lab]

Filter by: 36 Months | All | All | APPLY | RESET FILTERS

AE Studies

Studies	Pass Rate My Laboratory	Pass Rate All Participants	My Acceptable Evaluations	My Not Acceptable Evaluations	My Total Evaluations
AE-64	98%	95%	110	2	112
AE-62	93%	91%	91	6	97
AE-60	97%	92%	98	3	101

SOIL Studies

Studies	Pass Rate My Laboratory	Pass Rate All Participants	My Acceptable Evaluations	My Not Acceptable Evaluations	My Total Evaluations
SOIL-122	99%	96%	187	1	188
SOIL-120	98%	96%	158	3	161
SOIL-119	100%	100%	5	0	5
SOIL-118	98%	97%	164	3	167

Statistics – Study Summary

Home > Statistics > Study Summary Statistics

WP-339 Study Summary Statistics

Hardness (cat#580)

Standard: < 2 of 14 > Hardness (cat#580)

VIEW ALL STANDARDS

** Indicates that the values are reported as a percentage of the formulation/certified value

Analyte	Formulation/ Certified Value	Uncertainty(%)	Robust Mean			Standard Deviation (SPDA)			Satisfactory Range		(n)	%Acceptable	Anomaly
			Assigned Value (units)	Study(%)**	Hist(%)	Study (units)	Study(%)	Hist(%)	Study (units)	Study(%)			
Calcium	87.8 mg/L	0.269	86.5	98.6	99.2	4.27	4.93	4.90	78.0 - 95.1	90.1 - 110	154	99.4	
Calcium Hardness as CaCO3	219 mg/L	0.269	215	98.2	99.4	11.9	5.54	4.80	191 - 239	88.9 - 111	59	98.3	
Magnesium	27.0 mg/L	0.269	27.1	100	99.5	1.39	5.13	5.30	24.3 - 29.9	89.7 - 110	153	100	
Total Hardness as CaCO3	330 mg/L	0.367	327	99.0	99.2	15.8	4.83	4.00	295 - 358	90.3 - 110	136	97.8	
Total Suspended Solids	80.6 mg/L	0.269	79.3	98.3	94.6	2.66	3.36	6.60	73.9 - 84.6	93.3 - 107	194	93.3	

Statistics – Analyte Review

Analyte Review WP-339 Hardness

Calcium

VIEW ALL STANDARDS

Analyte: < 1 of 5 > Calcium

Analyte	Formulation/ Certified Value	Uncertainty(%)	Robust Mean			Standard Deviation (SPDA)			Satisfactory Range		(n)	%Acceptable	Anomaly
			Assigned Value (units)	Study(%)**	Hist(%)	Study (units)	Study(%)	Hist(%)	Study (units)	Study(%)			
Calcium	87.8 mg/L	0.269	86.5	98.6	99.2	4.27	4.93	4.90	78.0 - 95.1	90.1 - 110	154	99.4	

View in New Window | Chart

Manufacturing Range: 10.0 - 100 PTRL: 8.50

Technology Key: All Apply Filter Apply Highlight

Customer	Reported Value	% Recovery	Evaluation	Z-Score	Method Desc	Tech Key
	65.85	75.0	Unsatisfactory	-4.85	SM 3030 H/ 3111 B	OTHER
	73.7	Lower Warning Limit				
	75.1	85.5	Check for Error	-2.68	EPA 6010D	ICP-AES
	75.1	85.5	Check for Error	-2.68	EPA 6010C	ICP-AES
	75.1	85.5	Check for Error	-2.68	EPA 200.7	ICP-AES
	76.41	87.0	Check for Error	-2.38	SM 3111 B-2011	FAAS
	76.43	87.1	Check for Error	-2.37	EPA 200.8	ICP-MS
	76.5	87.1	Check for Error	-2.35	SM3111D	FAAS
	76.7	87.4	Check for Error	-2.31	EPA 200.8	ICP-MS
	77.9	88.7	Check for Error	-2.03	EPA 6010B	ICP-AES
	77.9	88.7	Check for Error	-2.03	EPA 200.7	ICP-AES
	78.0	Lower Satisfactory Limit				
	78.8	89.7	Check for Error	-1.81	EPA 200.7	ICP-AES
	79.98	91.1	Acceptable	-1.54	SM 3111 B-2011	FAAS
	80.3	91.5	Acceptable	-1.46	EPA 200.8	ICP-MS
	80.4	91.6	Acceptable	-1.44	EPA 200.8	ICP-MS

Tech Key	Robust Mean (%)	SDPA (%)	Percent Acceptable (%)	(n)
ICP-AES	99.1	5.15	100	96
ICP-MS	97.2	3.51	100	33
OTHER	104	4.19	88.9	9
FAAS	94.5	6.72	100	7

Technologies with 7 or more results are displayed

Corrective Action Process

- That's my great segue into corrective action
- We look at corrective action as a process, not just running another PT sample
- We recommend reviewing the paperwork and information we talked about earlier for avoiding common errors
  - Such as checking for any dilution requirements, reviewing the reporting instructions, checking the reporting units, reviewing lot numbers on the sample labels, etc.
- eDATA includes many tracking and trending tools, as well as the Statistics view
  - As part of a correction action process, and for routine monitoring of PT performance
- Waters ERA also offers technical support from our experienced staff
- CRMs (QCs) are available for every PT product in our inventory
- Don't hesitate to reach out and let us know how we can help

Live Q&A Session: eDATA Informatics Platform – The Basics

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