

PROJECT: Porewater Nutrients

Month YEAR Samples

2026-02-23

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```

##Run Information

cat("Run Information: NAME ") #lets you know what section you're in

## Run Information: NAME

#set the run date & user name
sample_year <- "2024"
user <- "NAME"

#identify the files you want to read in
#read in as a list to accomodate multiple runs in a month
NOx_files <- c("Raw Data/20260120_Tempest2024_NH3_P04_Run1.csv")
NH3_P04_files <- c("Raw Data/20260209_Tempest2024_VNOx_Run1.csv")

# Define the file path for QAQC log file - NO Need to change just check year
file_path <- "Raw Data/SEAL_TEMPEST_QAQC_Log_2024.csv"
final_path <- "Processed Data/COMPASS_Synoptic_Nutrients_202407.csv"

#record any notes about the run or anything other info here:
run_notes <- ""

#Set up file path for metadata
#downloaded metadata csv - downloaded from Google drive as csv for this year
Raw_Metadata = "Raw Data/COMPASS_SynopticCB_PW_SampleLog_2024.csv"

cat(run_notes)

```

##Setup

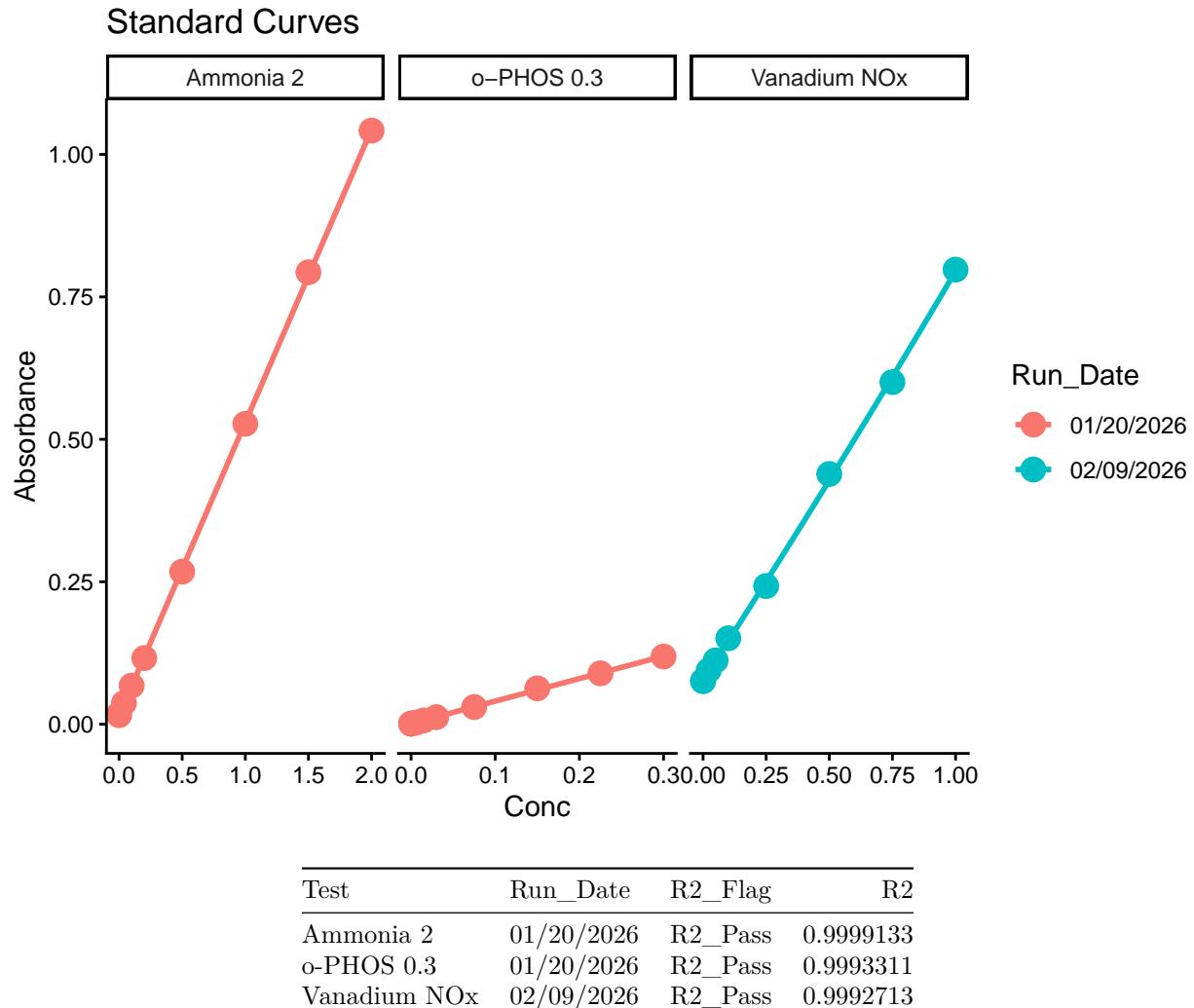
0.1 Pull in active porewater tracking inventory sheet from Google Drive:

##Create similar sample IDs to match with run samples

0.2 Import Data & Clean

0.3 Assessing standard Curves

```
##Pull out standards data
```



```
##Update Standard Log
```

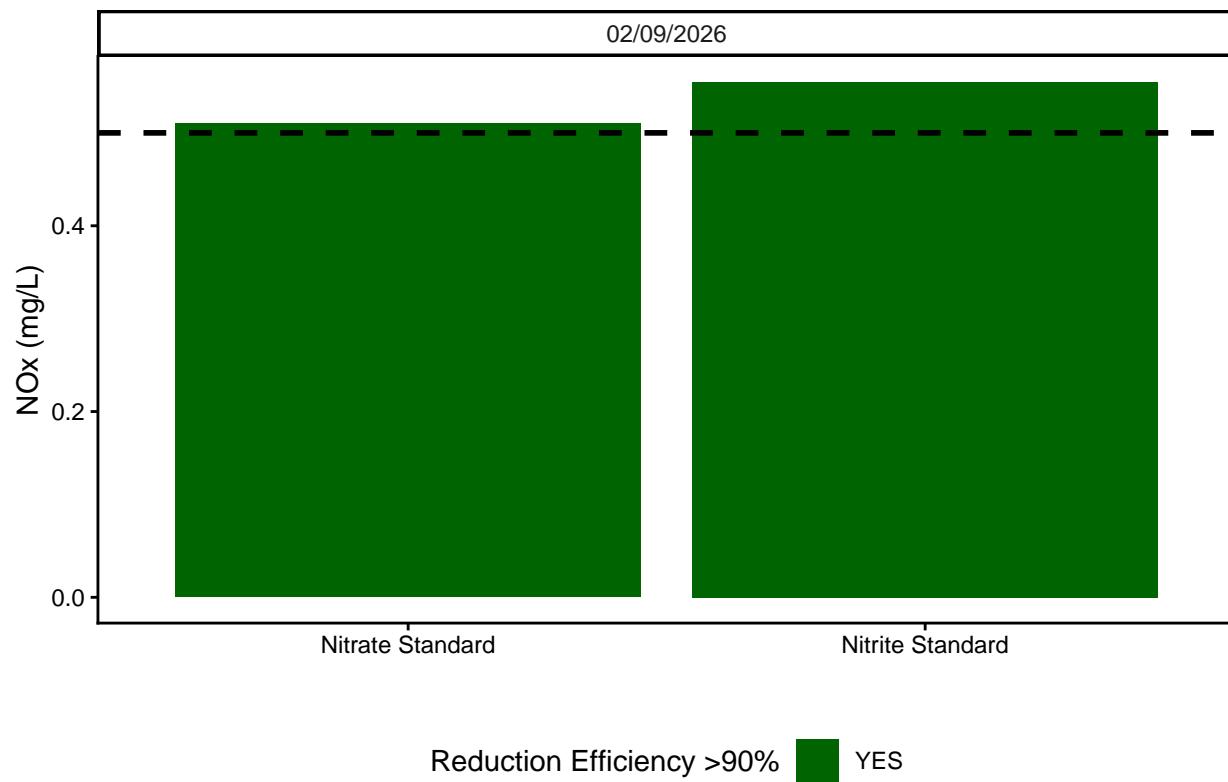
0.4 Dilution Corrections - ensure the latest dilution is kept

```
## [1] "No Reruns"  
  
## [1] "No Dilutions"  
  
## [1] "No Naming Issues Detected"
```

0.5 Performance Check

Test	Run_Date	PE_Flag	PE_Conc	PE_Target_Conc
o-PHOS 0.3	01/20/2026	Performance Check Within 25% - PROCEED	0.8646825	0.824
Vanadium NOx	02/09/2026	Performance Check Within 25% - PROCEED	1.7939875	1.510
Ammonia 2	01/20/2026	Performance Check Within 25% - PROCEED	1.1758200	1.034

0.6 Check NOx Reduction Efficiency

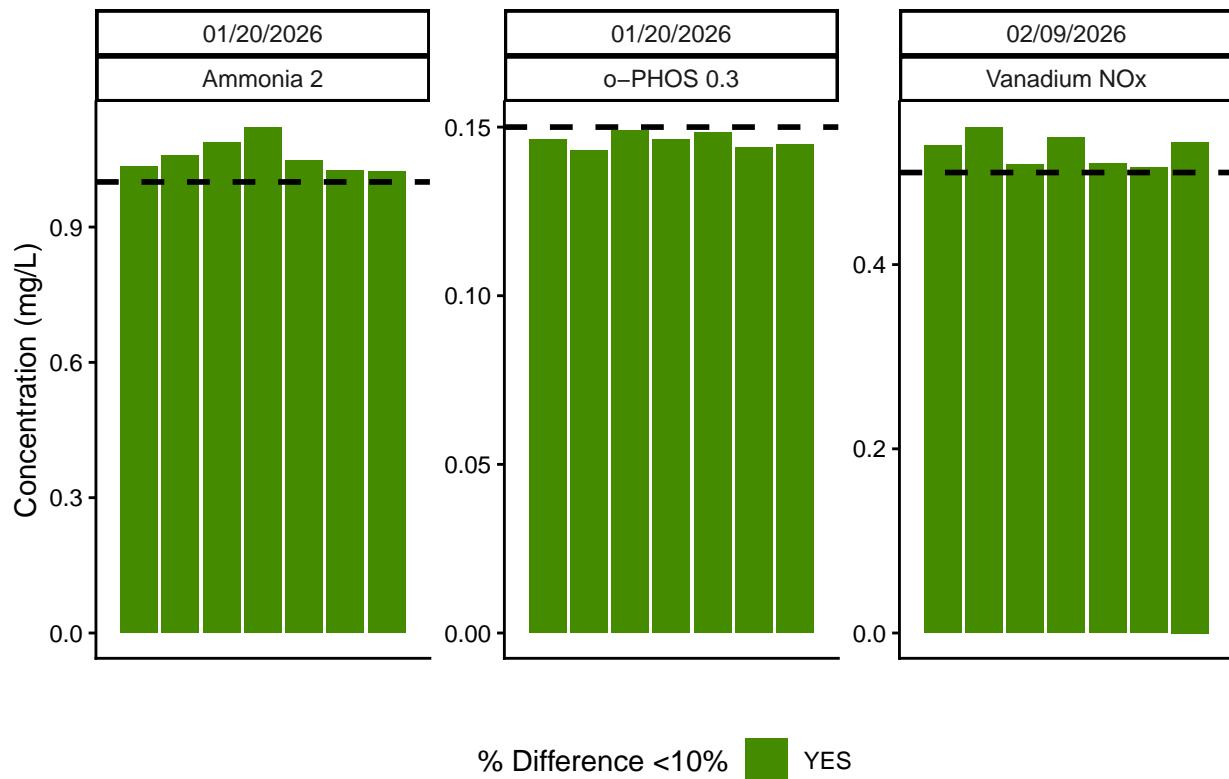


Test	Run_Date	Red_Eff_Flag
Vanadium NOx	02/09/2026	Mean NOx Reduction Efficiency >95% - PROCEED
Vanadium NOx	02/09/2026	Mean NOx Reduction Efficiency >95% - PROCEED

0.7 Analyze the Check Standards

Test	Run_Date	RSV_Flag	RSV	RSV_Cutoff
Ammonia 2	01/20/2026	RSV WITHIN RANGE - PROCEED	0.0341261	0.25
o-PHOS 0.3	01/20/2026	RSV WITHIN RANGE - PROCEED	0.0150141	0.25
Vanadium NOx	02/09/2026	RSV WITHIN RANGE - PROCEED	0.0320678	0.25

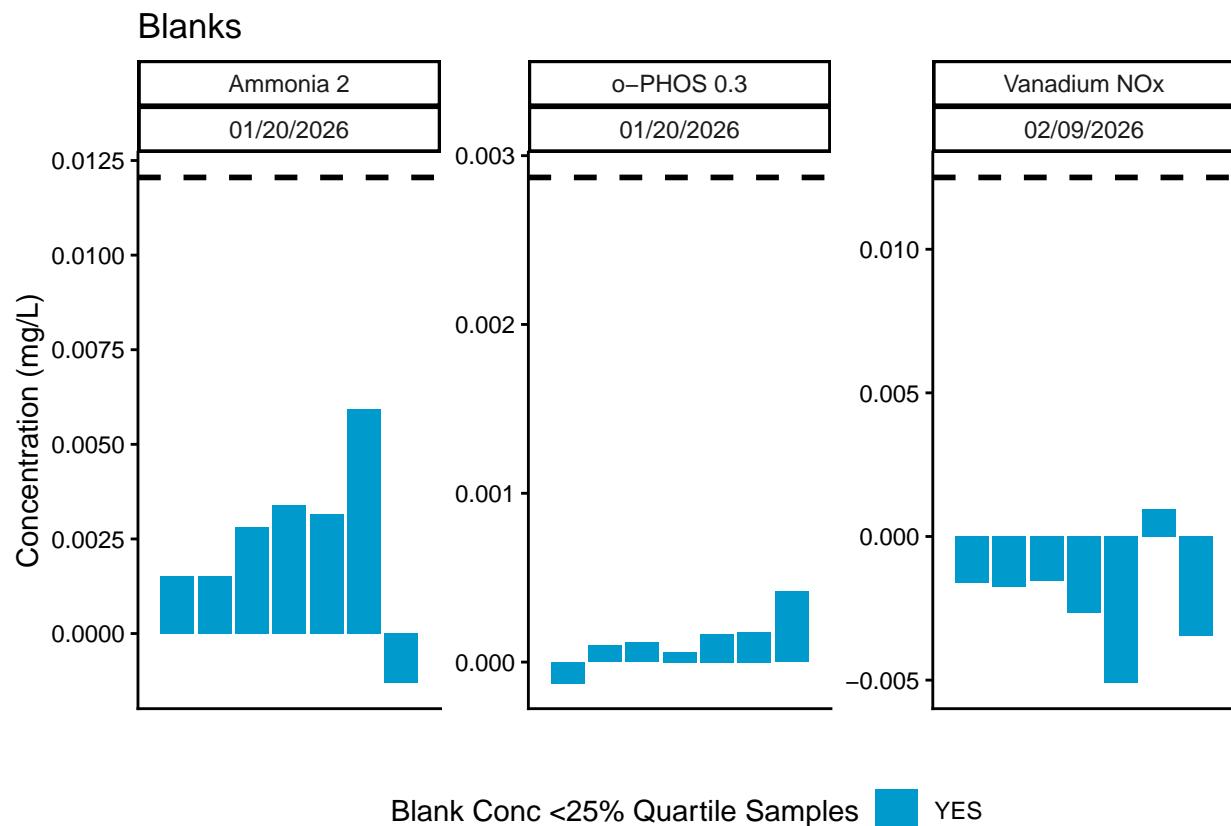
Check Standards



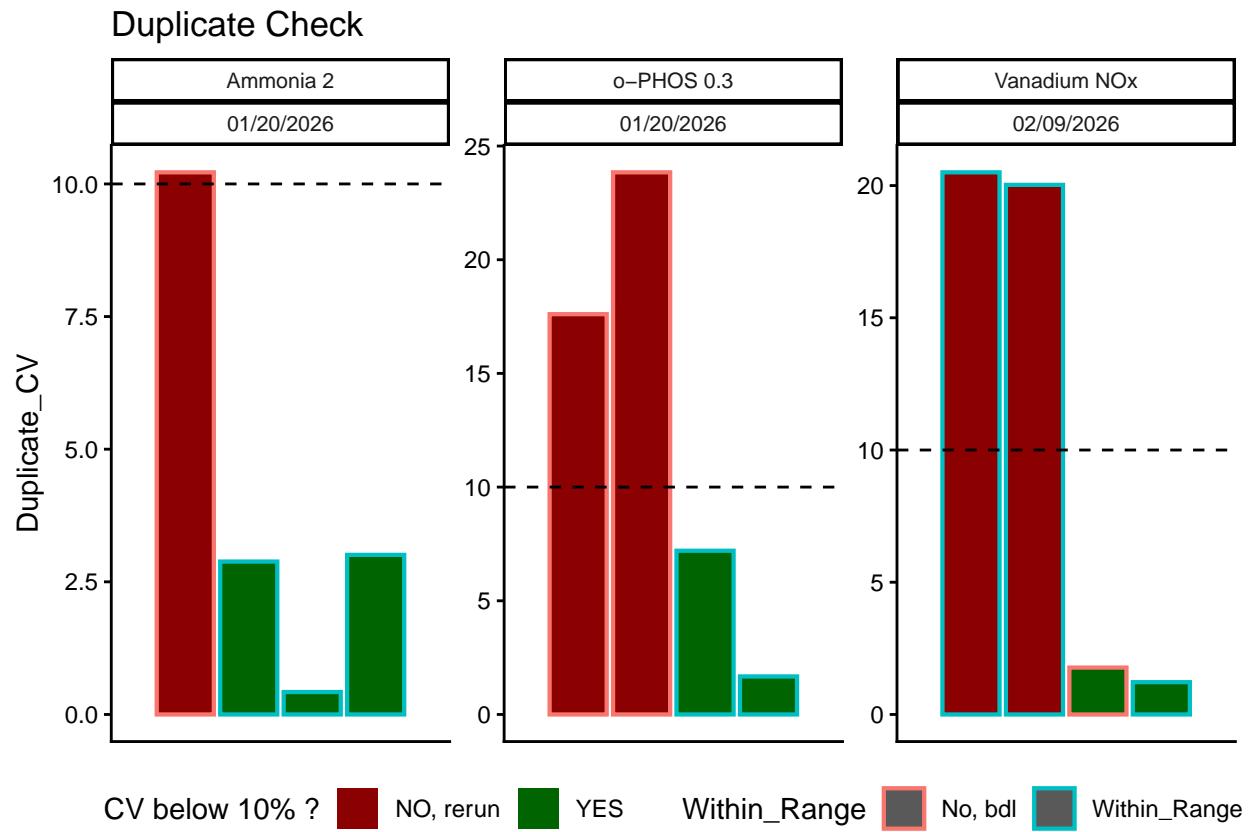
Test	Run_Date	CHK_Flag
Ammonia 2	01/20/2026	>60% of Checks Pass - PROCEED
o-PHOS 0.3	01/20/2026	>60% of Checks Pass - PROCEED
Vanadium NOx	02/09/2026	>60% of Checks Pass - PROCEED

0.8 Analyze Blanks

Test	Run_Date	BLK_Pct_Flag	Mean_Blk_Conc	Quantile_25
Ammonia 2	01/20/2026	>60% of Blanks Pass - PROCEED	0.0024320	0.012053
o-PHOS 0.3	01/20/2026	>60% of Blanks Pass - PROCEED	0.0001294	0.002871
Vanadium NOx	02/09/2026	>60% of Blanks Pass - PROCEED	-0.0021684	0.012500



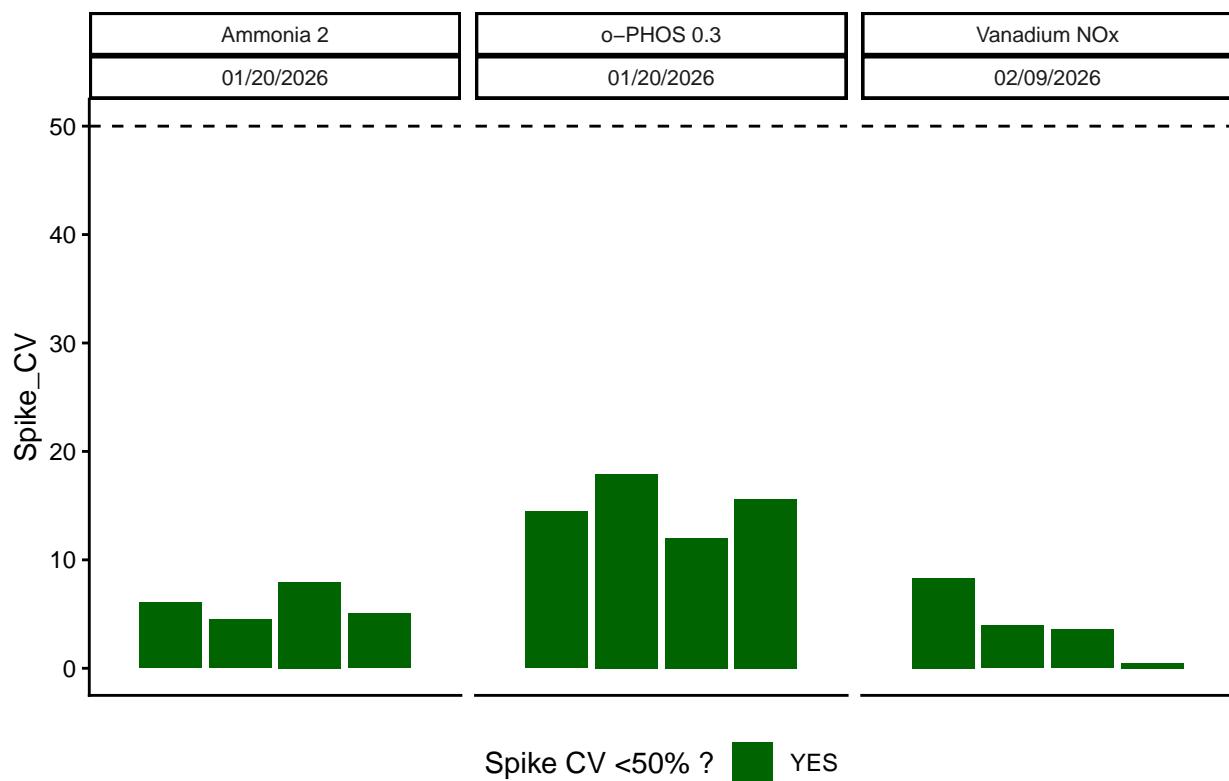
0.9 Analyze Duplicates



Test	Run_Date	Dup_Flags
Ammonia 2	01/20/2026	>60% of Dups Pass - PROCEED
o-PHOS 0.3	01/20/2026	<60% of Dups Pass - REASSESS
Vanadium NOx	02/09/2026	<60% of Dups Pass - REASSESS

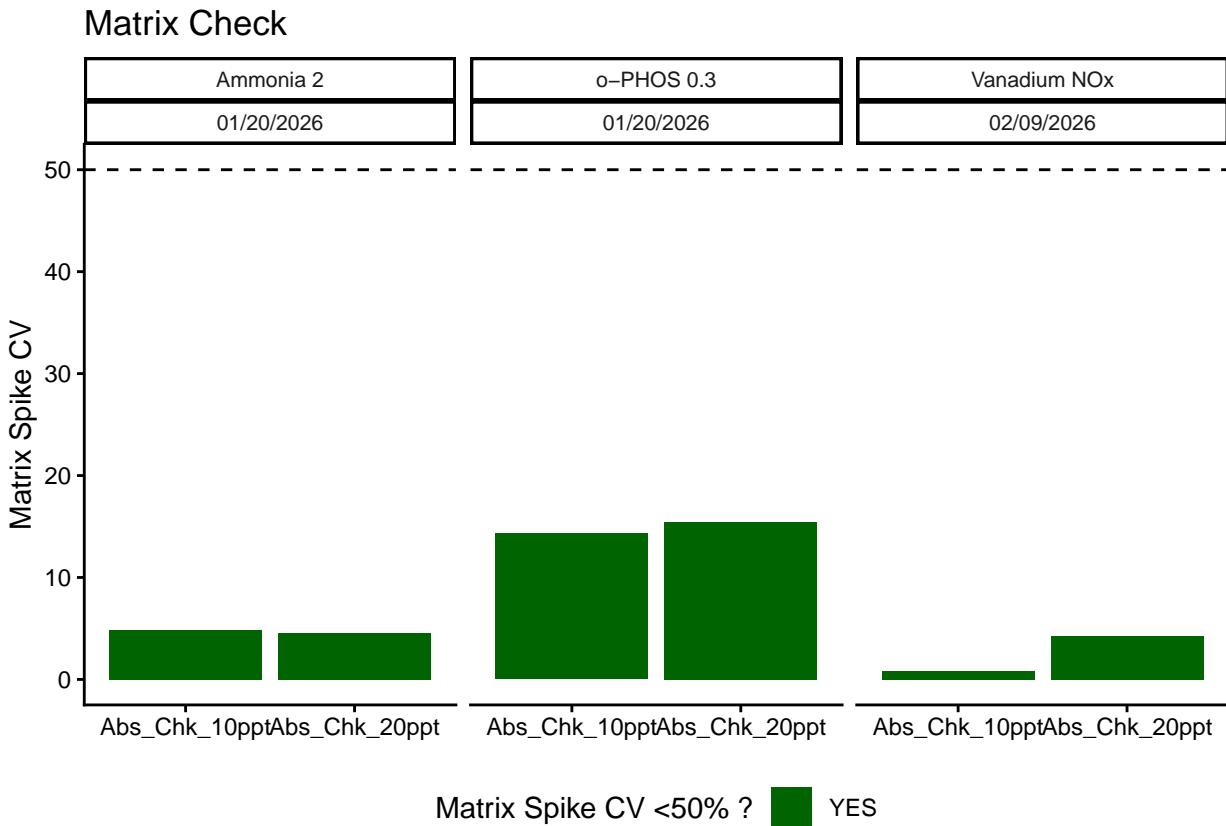
0.10 Spikes

Spike Check



Test	Run_Date	Spike_Flags
Ammonia 2	01/20/2026	>60% of Spikes have a CV <50% - PROCEED
o-PHOS 0.3	01/20/2026	>60% of Spikes have a CV <50% - PROCEED
Vanadium NOx	02/09/2026	>60% of Spikes have a CV <50% - PROCEED

0.11 Matrix Effects



Test	Run_Date	Matrix_Flags
Ammonia 2	01/20/2026	Matrix Has CV <50% - PROCEED
o-PHOS 0.3	01/20/2026	Matrix Has CV <50% - PROCEED
Vanadium NOx	02/09/2026	Matrix Has CV <50% - PROCEED

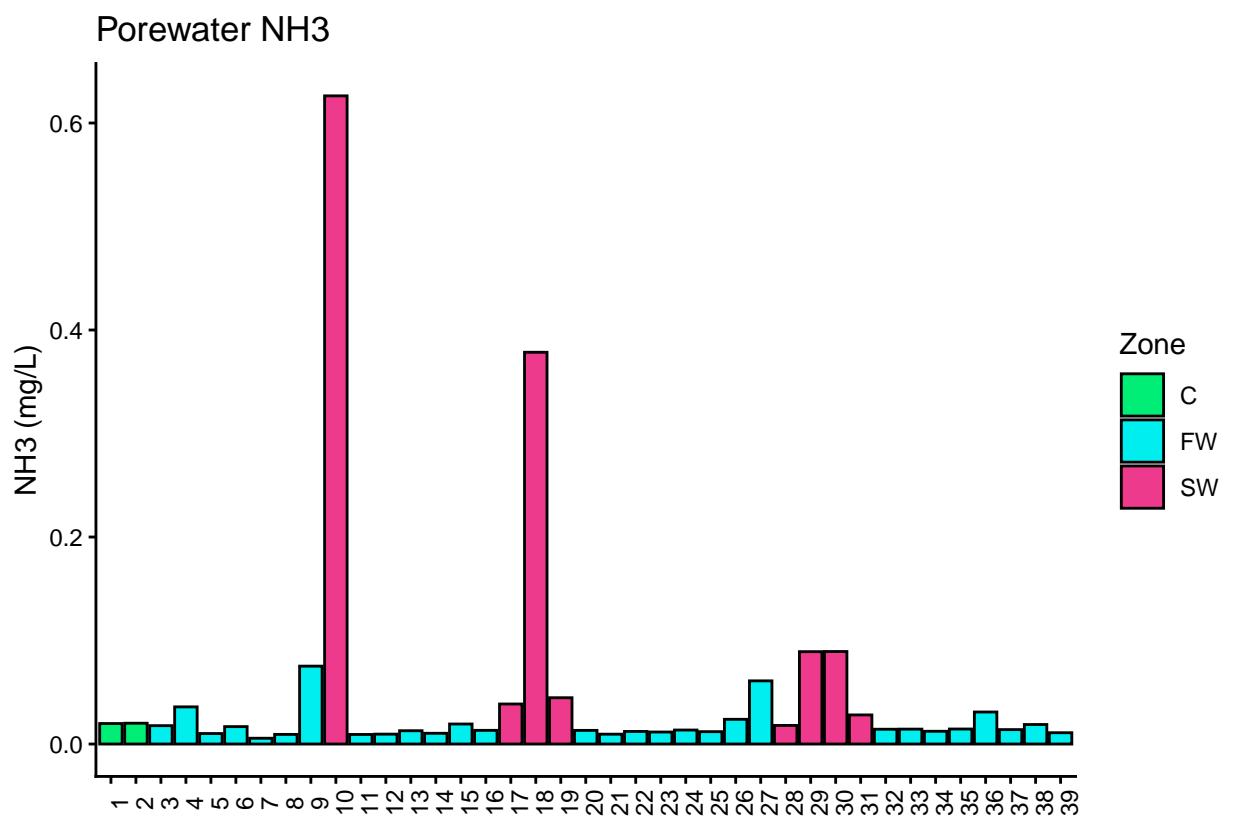
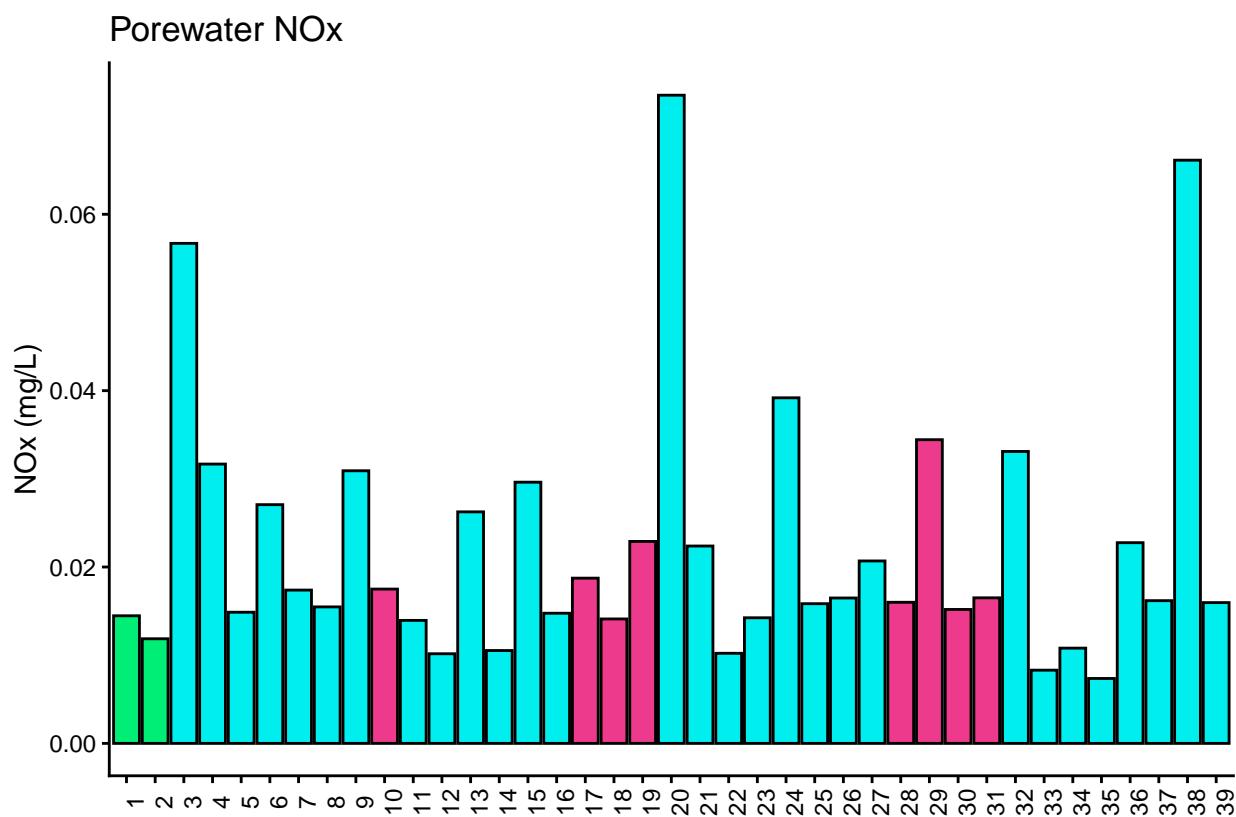
```
##Sample Flagging - Within range of standard curve
##Add QAQC Flags
```

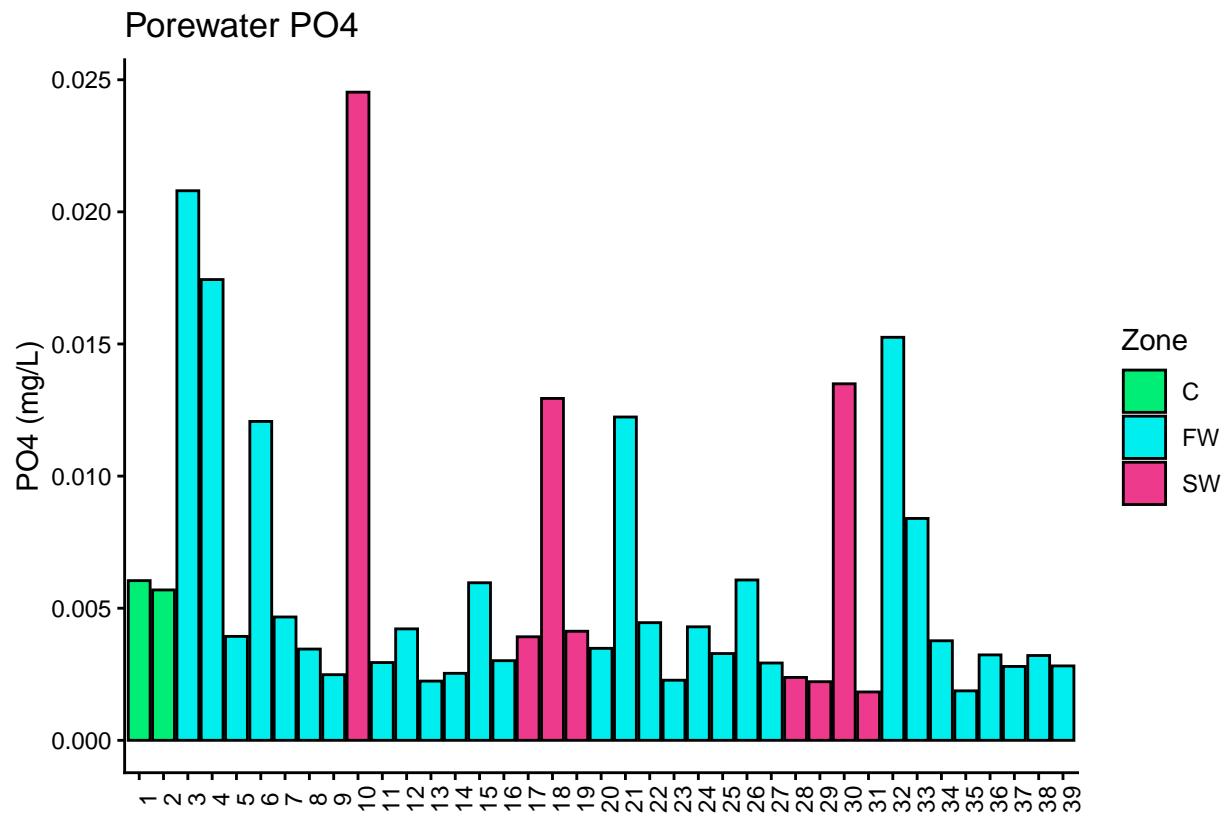
0.12 Check to see if samples run match metadata & merge info

```
## All sample IDs are present in metadata.
```

```
## [1] "Sample_Name"   "Run_Number"    "Conc"          "Absorbance"   "Dilution"
## [6] "Unit"          "Test"          "Run_Time"      "Run_Date"     "Keep"
## [11] "Pair_ID"       "Conc_uM"       "Conc_flag"
```


0.13 Visualize Data





```
##Format Data
##Write Out Data
#end
```