

NCWQA Regulatory Perspective





About the NCWQA



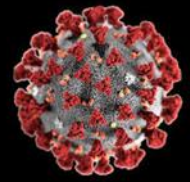
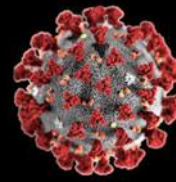
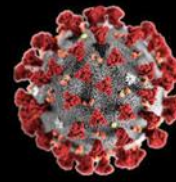
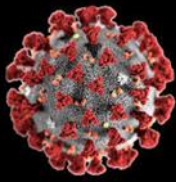
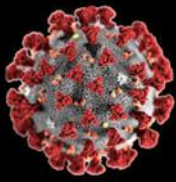
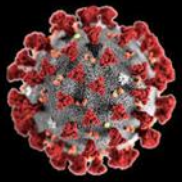
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- Statewide association of public water, sewer, and stormwater utilities representing a significant majority of the sewered population of North Carolina
 - ▣ Forty Utilities + Consultants
- Seeks appropriate, affordable, and cost-effective water-related regulations and policies that are based on sound science and good public policy
- Quarterly membership meetings and status reports

Agenda

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- COVID-19 & Pretreatment
- Emerging Contaminant Issues
- NPDES Permitting Issues
- Wipes Update
- Pretreatment Enforcement



COVID 19 Issues

Regulating During COVID 19/20

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Virtual inspections

Closed businesses

Waste products – restaurant/bar beer kegs

Inability to sample SIUs

Compliance During COVID

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- DEQ (and EPA) want **best efforts to comply** and **notice of non-compliance**
- DEQ will share **reporting code for CV-19-induced noncompliance** once contacted about your challenges
- Consider Force Majeure if legitimately beyond your ability to comply & NPDES Upset Defense
- Try to head off any problems related to high strength waste discharges into your sewer system

Influent/Collection System Sampling For COVID

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CV-19 influent/collection system sampling

- ▣ Influent for general/macro evaluation
- ▣ Collection system for more targeted
 - Sports venue
 - College campus
 - Hospital/nursing home
- ▣ May be very helpful for your community as early warning system against future spikes and illness

Sampling During COVID

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- Ensure your local Health Dept. and political leadership are aware....
- Early results suggest 10X infection rate
- This sampling may be here to stay for a variety of reasons/uses
 - ▣ Additional value/service by sewer enviro professionals



Emerging Contaminants

Emerging Contaminants

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- Uncertain as to their presence in our water resources/waste streams
- No one knows what level is truly “safe”
- Focus on health clusters in internet age gives us some comfort that Rome is not burning
- Residential groundwater impacts far more concentrated....

Unregulated Contaminants

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- Federal process to regulate new pollutants is complex and multi-year in most cases
- Some contaminants have very isolated national impacts so feds don't want to regulate
 - 1,4 Dioxane
 - Perchlorate

1,4 Dioxane

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- EPA unlikely to regulate 1,4-Dioxane
 - ▣ Estimates 2-3 cancer cases/year for entire country
 - ▣ Looking at non-cancer risks to justify regulation
 - ▣ Could take years before final decision
 - ▣ Local hot spots likely dealt with by states long b/f EPA

Perchlorate

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- 2008 Bush EPA declined to regulate
- 2012 Obama/Biden EPA said it would regulate
 - ▣ EPA did nothing over the next 4 years
 - ▣ Citizens sued Obama/Biden EPA and EPA agreed to issue a rule
- 2019 Trump EPA proposed 56 ppb but also requested comment on not regulating perchlorate – few remaining areas of impact
- 2020 Trump EPA determined that National perchlorate rule no longer warranted

EC Regulatory History....

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- Perchlorate (isolated; no longer need to regulate)
- 1,4 Dioxane (isolated; no longer need to regulate)
- PFAS?
 - ▣ Cumbersome federal regulatory process
 - ▣ Isolated rather than widespread impacts
 - ▣ Will states/utilities/industries address it well ahead of cumbersome federal process?

Federal PFAS Legislation

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- Efforts in Congress to designate PFAS as hazardous substances under CERCLA and/or establish limits under both Safe Drinking Water Act and Clean Water Act
- If enacted, there will be major pretreatment impacts for potentially hundreds of PFAS chemicals

NC PFAS/EC Legislative Proposals

NC PFAS Efforts – Failed HB 1108

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- Comprehensive regulatory bill that required:
 - ▣ NPDES permittees and IUs must disclose all pollutants above PQLs
 - ▣ Permittees must eliminate PFAS prior to discharge
 - ▣ If elimination impracticable, permittees must make IUs eliminate PFAS
 - ▣ Rules to ensure no migration of PFAS from biosolids to land or water
 - ▣ If removal impracticable, no leachate with detectable PFAS to WWTPs

HB 1108 cont'd

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- Comprehensive regulatory bill that addressed:
 - ▣ If no EPA method for (all) PFAS in wastewater, DEQ must approve one
 - ▣ \$ for DEQ studies of emerging contaminants, PFAS occurrence, PFAS disposal
 - ▣ \$80M in GF revenue for water plant upgrades to address PFAS
 - ▣ Attorney General to assess options to recover PFAS damages/costs

Emerging Contaminant Issues

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- Domestic sources
- Industrial sources
- Leachate
- Targeted and Broad Spectrum/Non-targeted sampling

What Should Pretreatment Professionals do Now?

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- PFAS & other ECs
 - ▣ NB: PFAS ubiquity makes elimination impossible
- Pretreatment Minimization Plans
 - ▣ Minimization pending standards development
- PFAS & other EC inquiry letters to your SIUs and other usual suspects
 - ▣ What they know about their PFAS chemistry and other ECs in their wastewater

Best Pretreatment Approach to PFAS & Unregulated Contaminants Now?

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- Usual suspects: Landfill leachate
 - ▣ Conundrum for most communities
 - ▣ Not significant for most POTWs based upon current understanding of potential WQS
- Support Reuse of Biosolids
 - ▣ Anti-PFAS leaching rqmt could end land application
- Same ID & minimization approach for 1,4 D and other ECs of interest/concern

Get Ahead of EC Sampling

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- In our view, best to characterize EC levels and institute an appropriate minimization program
- Characterizing PFAS levels (influent, effluent, biosolids) helps start process of working to lower those levels through cooperative measures with IUs and other PFAS sources
- Many IUs are only now focusing on ECs in their products/wastewater

IU Response

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- Many IUs have jumped at opportunity to reduce PFAS usage
- 1,4D usage
 - ▣ Previously not on radar screens of some
- Most readily substitute products once educated to the presence of ECs of interest/concern

Emerging Contaminants & Disclosures

Disclosure Requirements

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□ 3 Disclosure Requirements

- ▣ Information and data provided by an industrial user of a POTW system must be made available to the public on request
- ▣ “Confidential Business Information” exception, and
- ▣ Blanket rule that **effluent data** must be disclosed

Disclosure Exceptions

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□ CBI Exception

- ▣ May provide this exception in narrow case of IU data despite conflicting state law
- ▣ Information and data on raw, intermediate, and finished materials & information on production processes would constitute CBI at the election of the IU
 - POTW should shield such information and data on request of the IU

Citizen PFAS Challenges

Wastewater Issues

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- There may be significant chemicals in our wastewater that we can't detect....
- A NC example
- Riverkeepers targeting discharges of unregulated contaminants with the help of public interest lawyers

SELC Comments on NC Permits

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- POTW must disclose PFAS under CWA
 - ▣ We fill out EPA/DEQ application....

- Should require IUs discharging PFAS to add GAC
 - ▣ Michigan approach

- TBELs for POTWs

- WQBELs for POTWs to meet narrative criteria

SELC Permit Comments

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- DEQ proposed NPDES permit modification to discharge reverse osmosis concentrate
- SELC contested permit
 - ▣ Would not prevent release of PFAS chemicals b/c unlisted and unpermitted – alleged CWA violation
- Permittee: PFAS data was submitted to DEQ and permit itself requires PFAS monitoring
- DEQ: No current state or federal WQS for PFAS and therefore no effluent limits can be calculated

SELC Permit Comments cont'd

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- POTW conducted weekly water samples at plant to measure and track PFAS contamination
- In the end, SELC did not formally challenge the discharge permit
- However, SELC is aggressively commenting regarding PFAS issues on other proposed discharge permits...

SELG's NC Permit Approach

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- POTW must disclose PFAS under CWA in effluent and permit application if it wants permit shield
- Permit should not allow discharge of PFAS
- Effluent limits
 - ▣ TBELs for POTWs
 - ▣ WQBELs for POTWs to meet narrative criteria

SELC Comments on NC Permits

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- Should require IUs discharging PFAS to add GAC
 - ▣ Michigan approach
- For wastewater plants
 - ▣ Install treatment to remove PFAS, or
 - ▣ Force users of the system to eliminate their PFAS contributions
- SELC does not say what it wants for water utilities (esp. those where the PFAS source is upstream raw river water)

SELC Comments on NC Permits

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- May use litigation to attempt to force DEQ to prohibit or impose limits on PFAS discharges ahead of DEQ's adoption of any WQS for PFAS
- SELC has threatened litigation in one instance
 - ▣ SELC alleged that City violating permits and federal/state law by:
 - Discharging PFAS chemicals and 1,4 Dioxane in wastewater effluent + allowing PFAS in land applied biosolids to reach surface waters

DEQ EC-Related Enforcement Actions

Threatened 1,4 Dioxane Enforcement Actions

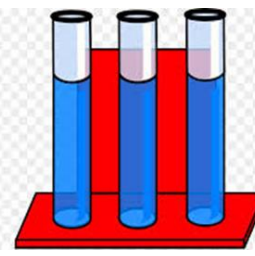
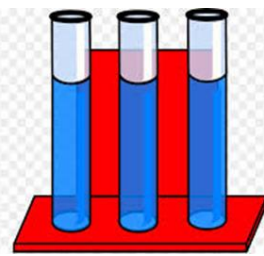
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- DEQ issued recent NOV to 2 POTWs alleging that recent 1,4 Dioxane sample at each facility was unusually high
- Alleged violations of:
 - ▣ (1) state WQS by interfering with downstream drinking water uses, and
 - ▣ (2) permit requirement to notify DWR within 24 hours of any unusual discharge

1,4 Dioxane NOV Concerns

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- DEQ does not explain why 1,4 Dioxane result in question considered abnormal or unusual
- Troubling b/c were not aware that DEQ requested notice from the POTW about any discharges of 1,4 Dioxane above a certain threshold
- No explanation as to how level adversely impacted the POTW's pretreatment program or operation of the POTW



Permitting Issues

Split Sampling

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- Question about proper treatment of split samples
- Split is the same sample divided into two or more aliquots for separate analysis
- Reporting approach has always been to average the individual aliquot results as long as each aliquot passes QA/QC

Split Samples

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- Yet no clear statute/regulation speaks to reporting of split sampling
 - ▣ Unless I have missed something???

Split Samples

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- NCWQA member received unusual results for zinc in its biosolids
 - ▣ Split sampled; results were 7600, 7000, 5000
 - ▣ Average = 6533
 - 7500 is the compliance level
- Wrote to EPA to confirm we should report average

EPA R7 Biosolids Center Stance on Split Samples

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- 40 CFR Part 503 does not prohibit splitting samples, but...
- 40 CFR 503.8(a) requires *representative sampling*
- Does not say our proposal to average 3 results inappropriate – says to comply with any requirements in NPDES permit

EPA 1992 IU Split Sample Compliance Memo

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OFFICE OF WATER

MEMORANDUM

SUBJECT: Determining Industrial User Compliance Using Split Samples

FROM: Richard G. Kozlowski, Director *by Mary Jo M. Aiello*
Enforcement Division

TO: Mary Jo M. Aiello, Acting Chief
Bureau of Pretreatment and Residuals

EPA 1992 Memorandum

This memo is a response to your letter of September 30, 1991, where you requested written clarification regarding the use of split samples for **determining industrial user (IU) compliance under the Pretreatment Program**. Specifically, you requested guidance on how to **use the data from split samples for determining IU compliance** in situation where split samples yield different analytical results. The fundamental question posed by your inquiry is whether all analytical results must be used when evaluation the compliance status of IUs and how to use those results for determining compliance. In situations **where split samples exist and both samples were properly preserved and analyzed, POTWs should evaluate compliance with applicable Pretreatment Standards in the manner described below.**

1992 Memorandum

When evaluating the compliance status of an industrial user, the POTW must use all samples which were obtained through appropriate sampling techniques and analyzed in accordance with the procedure established in 40 CFR Part 136¹. The Environmental Protection Agency (EPA) has consistently encouraged Publicly Owned Treatment Works (POTWs) to periodically split samples with industrial users as a method of verifying the quality of the monitoring data. When a POTW splits a sample with an IU, the POTW must use the results from each of the split samples.

1992 Memorandum

A legitimate question arises, however, when a properly collected, preserved and analyzed split sample produces two different analytical results (e.g., one which indicates compliance and the other shows noncompliance, or where both indicate either compliance or noncompliance but the magnitudes are substantially different). In these instances, questions arise regarding the compliance status of the IU, and what should be done to reconcile the results.

There is inherent variation in all analytical measurements, and no two measurements of the same analyte (even when drawn from the same sample) will produce identical results. When a split sample is analyzed using appropriate methods, there is no technical basis for choosing one sample result over the other for determining the compliance status of a facility. Since this is the case for all split samples which have been properly analyzed, the POTW should average the results from the split and use the resulting average number when determining the compliance status of an IU. Using the average of the two sample results avoids the untenable situation of demonstrating compliance and noncompliance from the same sample.

1992 Memorandum

- If the split sample produces **widely divergent results** or results which are different over a long period of time, then the cause of the discrepancy between the analytical results should be reconciled. When this happens, the POTW should **investigate Quality Assurance and Quality Control (QA/QC) procedures** at each laboratory involved. For example, the POTW could submit a spiked sample (i.e., a sample of known concentration) to the laboratories involved (preferably blind) to determine which laboratory may be in error.

1992 Memorandum

In situations, where one or both of the analytical results is determined to be invalid, there are compliance and enforcement consequences. If one of the analytical results is determined to be invalid, the average value for that sample is also invalid. In this situation, the value for this sample should be the value of the sample which was not determined to be invalid (e.g., if the IU's results are determined to be invalid, the POTW should use its samples for assessing compliance, and vice versa). If both samples are determined to be invalid, the averaged result from that sample should be discarded and not used for compliance assessment purposes. In either case, the POTW must recalculate the compliance status of the IU using all remaining valid sample results.

1992 Memorandum

In summary, whenever split samples are taken and both are properly preserved and analyzed, the POTW should average the results from each sample and use the averaged value for determining compliance and appropriate enforcement responses. Where the sample results are widely divergent, the POTW should instigate QA/QC measures at each of the analytical laboratories to determine the cause of the discrepancy. If one or both of the samples are invalid, the POTW must recalculate the compliance status of the IU using all valid results.

Significant Figures and Rounding

eDMR Rounding: Possible Errors

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- Remember to check any eDMR results just over or under any applicable limits
 - ▣ To ensure proper use of significant figures
- Recent example:
 - ▣ Permit limit for TSS is 30 mg/L as a monthly avg;
 - ▣ e-DMR system calculated monthly avg as 30.15 instead of rounding to 30
 - ▣ eDMR calculated avg to two decimal places – incorrect!
- DEQ's system still not properly identifying correct number of significant figures and rounding

Reportable Samples

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- Potential disagreement about which effluent samples must be reported
- Permit standard conditions versus DWR incorrect reading of DEQ Regulation
- ALWAYS read (and follow) your permit....

NPDES Standard Conditions/Permit Shield

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2011 Standard Conditions, at 11, Sec. 5.b:

If the Permittee monitors any pollutant **more frequently than required by this permit using test procedures** approved under 40 CFR Part 136 and **at a sampling location specified in this permit** or other appropriate instrument governing the discharge, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.



Silver Implementation

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- NC chronic silver limit is 0.06 ug/L
 - ▣ Very stringent; not required under federal law
 - ▣ Ideally would be removed from WQS reg.

- Water Effects Ratio can provide relief
 - ▣ NCWQA member recently calculated WER >10X



Wipes Litigation Update

Wipes Update

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COVID 19 TP Shortage + Disinfection craze

= Wipes everywhere

Wipes

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- Litigation will be filed shortly against US wipes manufacturers
- Seeking:
 - ▣ Labeling of wipes (either flushable or not)
 - ▣ Size of label; contrast with packaging
 - ▣ Policy to reimburse homeowners for damaged plumbing
- Major manufacturer close to agreeing to settlement in advance of litigation

Wipes

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- Wipes will only be labeled as “flushable” if they meet a defined slush box test (that we think is realistic and appropriate) with
 - ▣ 50% of the wipe passing through a one-inch sieve by January 2021
 - ▣ 60% by January 2022
 - ▣ 70% by January 2023
- Five years of independent testing of flushable products against an agreed test.

Wipes Update

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- Labeling specifications for both flushable and non-flushable products

Ferrous Sulfate for Odor Control

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- One recent case where addition of ferrous sulfate in a NC collection system has led to high zinc levels in biosolids
- Reminder to watch chemical composition of all additives to the collection/treatment systems....

Pretreatment Enforcement

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- Essential that you follow your ERP
- Work to educate your management, local elected leaders, and sewer system users to the importance that you follow your ERP....

Questions?