

*Is It Really Finer...
To Be In Carolina...
In Pretreatment...*

Comparison of North Carolina PT
Requirements and
Federal PT Requirements

Background

- States and Territories have the choice to:
 - Submit application to receive primacy over NPDES Permit Program
 - Submit application to receive primacy over Pretreatment Program
- If they do not want primacy for the programs:
 - EPA issues the NPDES permits for that state
 - All PT Programs report directly to their EPA Region
 - Ten EPA Regions – We are in Region IV

Background - Options

- Pennsylvania Scenario
 - POTWs develop programs & Report directly to EPA Region III
 - Only Federal EPA PT rules/guidance used
- Alabama Scenario
 - State conducts the whole program including SIU Permit writing, SIU inspections/sampling, Local Limits, etc.
 - State of Alabama reports directly to EPA Region IV

Background - Options

- Georgia Scenario
 - Some POTWs develop programs & report to GA
 - State of Georgia issues some SIU permits and does all sampling/inspections, etc. (about 66 SIUs)
- North Carolina Scenario
 - POTWs develop programs & report to NC
 - Report to Central office on some items and Regional office does PCIs and audits
 - State is Approval Authority and has adopted more stringent rules for PT programs

Background - Options

- Virginia Scenario
 - Adopted EPA Regulations exactly
 - Regions set up for NPDES and Pretreatment
 - POTWs report only to regional staff
 - Local Limits, PARs, etc.
 - Each region operates independently
 - One central PT person

Pretreatment Annual Report

- No Pollution Prevention Information required by EPA or other states
- No allocation table required by EPA or other states
- State of Virginia – POTWs only required to submit monitoring data for industries that are in SNC

SIU PERMITS

- Other states (and EPA) review a certain percentage of permits during audits
 - Thus the audits may be 1-2 days
 - EPA audits often conducted by contractors (Tetra Tech, etc.) and can be brutal I've heard (California)
 - Must send copy of permit/app/inspection (either in PAR or as you go, but after the fact not for “approval”)
- North Carolina is the only state I have come across that required every permit be submitted for review and approval before issuance
 - Of course, new NC guidance now allows cities to opt out of this if the PT staff meet certain criteria

SIU PERMITS

- Other states and EPA do not require POTW to request “permission” to drop an SIU
 - SIU List required by EPA in Pretreatment Annual Report is used for update of SIU list annually
- No allocation table required to be submitted with every permit issuance
- SIU Definition did not include 5% of any MAHL*
 - *Recently changed by North Carolina to match EPA
- No POTW sampling frequency required in SIU permits by EPA
- No permit history page required by EPA regulations

HEADWORKS ANALYSES

- EPA follows EPA Local Limits Guidance Document exactly!
 - Published in July 2004
 - Huge Document that covers a variety of topics
 - Available on EPA Website
http://www.epa.gov/npdes/pubs/final_local_limits_guidance.pdf
 - “Guidance”..not regulation...not requirement
- Many states follow the EPA Local Limits Development Guidance Document exactly
- North Carolina has developed more stringent local limits guidance in some matters

HEADWORKS ANALYSES:

- Neither the 403 regulations nor the EPA Local Limits Guidance require:
 - Allocation tables
 - Long Term Monitoring Plans
 - “Theoretical literature” MAHL calculations and local limits for pollutants that are BDL on the influent, BDL on the effluent and well within sludge requirements/ limitations

EPA RECOMMENDS.....

RE: Pollutants of Concern

- *EPA recommends that before undertaking the extensive collection and analysis of sampling data for the development of local limits, a POTW should conduct a screening to determine which POCs should be included in the full headworks analysis*

EPA RECOMMENDS.....

RE: Pollutants of Concern

- Conduct Screening evaluations for all potential POCs identified
- Limited Sampling for all Potential POCs
- May significantly reduce set of POCs
- Determine Final POCs for Local Limits Sampling Plan

EPA RECOMMENDS.....

POC Screening

- Collect minimum of 1 or 2 influent, effluent and sludge samples for all potential POCs
- Review priority pollutant scans
- Analyze screening data and historical data from at least previous 2 years
- Compile results and compare to.....

EPA RECOMMENDS.....

You Know You're a POC if the...

- Maximum POTW effluent concentration is >50% of NPDES effluent limit based on water quality criteria
- Maximum POC sludge concentration is >50% of applicable sludge criteria
- Maximum POTW influent 24-hr composite is >25% of inhibition threshold
- POTW influent concentration [adjusted for receiving stream dilution] exceeds water quality criteria/standards

EPA RECOMMENDS...

Table 4-2: Minimum Recommended Sampling Frequencies for Ongoing Local Limits Analysis and Evaluation

| Parameter | Location | Less than 5 MGD | 5 – 10 MGD | 10 – 50 MGD | Greater than 50 MGD |
|--|----------------------------|------------------------|---------------------|---------------------|----------------------------|
| Pollutants for which local limits were adopted | Influent, Effluent, Sludge | Once every 3 months | Once every 3 months | Once every 3 months | Once every 2 months |
| Pollutants for which MAHLs were calculated, but for which no local limits were adopted | Influent, Effluent, Sludge | Once every 12 months | Once every 6 months | Once every 6 months | Once every 3 months |
| Organic Priority Pollutants | Influent | Once per year | Once per year | Once per year | Once every 6 months |
| TCLP Pollutants (1), sludge | Sludge | Once per year | Once per year | Once per year | Once per year |
| Sludge percent solids and specific gravity (2) | Sludge | Once every 6 months | Once every 4 months | Once every 3 months | Once every 2 months |
| <p>(1) Conducted if sludge is (or is likely to be) disposed of in a landfill. (2) The sludge regulations at 40 CFR Part 503 already require the percentage of solids to be determined every day that sludge is applied to land.</p> | | | | | |

Quote from EPA LL Guidance

- *EPA recommends that the POTW conduct additional screening for any pollutant found in the priority pollutant scans of its influent, effluent or sludge to determine whether the pollutant should be listed as a POC. Although a pollutant found in this way is a potential POC, the POTW may determine, based on the pollutant's concentration and on other data from IUs and commercial dischargers that the pollutant need not be selected as a POC for the full headworks analyses...*

EPA LL Guidance

- EPA: Focus is on POTW influent data and loading vs. MAHL calculation
 - EPA Recommendation: Send influent data in with PAR and discuss comparison of influent loading vs. MAHL calculations
- North Carolina: Focus is on “paper loading” to the exclusion of the influent loading

EPA: Comparison of Loading with MAHLs for Pollutants with no Developed Local Limit

IF

THEN

| | |
|---|--|
| HW Loading > MAHL | Establish Limit for POC Investigate cause |
| HW Loading > threshold (1st time) | Increase monitoring OR develop limit |
| HW Loading > threshold (2nd time) | Establish limit/increase monitoring |
| Loading < threshold | Keep pollutant under review |

EPA: Comparison of Loading with MAHLs for POCs with Developed Local Limit

IF

THEN

| | |
|--|---|
| Loading > MAHL | Revisit Limit Investigate cause Consider P2 |
| Loading ↑ from last year (e.g. 55% to 75% MAHL) | Investigate Increase monitoring OR Develop new limit |
| Loading < threshold | Keep pollutant under review |

EPA Q & A from LL Guidance

- Once I establish a local limit, will I ever be able to drop it?
 - If some pollutants of concern are no longer present or are present only in concentrations that will not cause pass through, interference or degradation of sludge quality, then the local limits...may be dropped after appropriate procedures are taken...

EPA Q & A from LL Guidance

- If a pollutant is below the detection limit in influent, effluent and sludge, may a POTW exclude it as a POC (and not develop a MAHL) even if it is one of EPA's 15 pollutants?
 - Yes, it may. If a POC is not detected in the influent, effluent or sludge during the POTW's assessment of the need for local limits, an accurate calculation of the MAHL for that particular pollutant is not possible...

EPA Q & A from LL Guidance

- Do I have to outline a sampling plan for the local limits evaluation?
 - Outlining a sampling plan for local limits evaluation is not required by 403 regulations, although some approval authorities require submission of such a plan. However, EPA highly recommends that a POTW develop a sampling program...by providing the data necessary to determine and justify that local limits are not necessary for some pollutants.....

EPA Q & A from LL Guidance

- How much literature data are acceptable in deriving MAHLs?
 - ...The most accurate and defensible limits are the result of using site-specific data, rather than “generic” removal efficiency data derived from average, national level treatment works “literature data”.

Industrial Waste Survey

- Virginia does “on-going” IWS
 - Nothing from IWS is required to be turned in to state for review and approval– Inspections/forms are kept on-site by POTW
 - Inspector looks at survey information during PCIs and audits
 - No required industrial directory for survey....POTW determines who will be surveyed
 - **Virginia State PT staff go on joint inspections with POTWs and try to get to all SIUs at least once every 5 years (state writes separate inspection report)

North Carolina “Extras”

- Some are good...
 - Technical Assistance without having to contact EPA
 - Headworks Analysis Linked Spreadsheets
 - North Carolina created the “Headworks Addendum for Sludge Loading (HASL) for biosolids
 - Training Programs for HWA, Permitting, PAR
 - No contractors doing PCIs and audits
 - EPA recommends 10% Safety factor – NC does not really enforce this