



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Charles Wakild, P.E.

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

DATE: January 17, 2012
TO: Pretreatment Coordinators
FROM: Deborah Gore
PERCS Unit Supervisor
DENR, DWQ, PERCS
1617 Mail Service Center
Raleigh, NC 27699
919-807-6383 919-807-6489(fax)

SUBJECT: Pretreatment Questions, Discussion and Addendum to 2012 PAR Workshop Materials

Please note, these answers are based on our best current understanding of and compilation of past guidance, input from municipalities, information from state, national, and EPA pretreatment workshops, meetings, current practice, regulatory reference and interpretation and are subject to revision if errors or contradiction to regulation or law is found.

As always, please contact the Division of Water Quality's Pretreatment staff to discuss extenuating circumstances for any specific situation.

If there are further questions, comments, or suggestions about how to simplify or improve the PAR requirements or PAR forms, please let the Division know.

1. When are PARs due?

All PARs are due on March 1st every year, and cover pretreatment activities for the previous calendar year.

If March 1st falls on a Saturday or Sunday, PARs will be accepted on the following Monday and not be considered late.

2. Are modified programs required to submit PARs?

15A NCAC 2H .0908(c) reads as follows, "In lieu of submitting annual reports as described in Paragraph (b) of this Rule, the Division Director may allow modified pretreatment programs developed under Rule .0904(b) of this Section to submit only a partial annual report, or to meet with Division personnel as required to discuss enforcement of pretreatment requirements and other pretreatment implementation issues."

Modified programs, just like Full programs, must review industrial monitoring and reporting, send NOV's, determine SNC and follow their ERP.

PCIs are done at every program, both Full and Modified, at least once every two years with an Audit every 5th year.

The Central Office asks that all modified programs submit at least the following information by March 1, of each year:

1. The Significant Non-Compliance Report (SNCR) form listing any industries in SNC. If no SIUs are in SNC submit the form with "NONE" written on it.
2. Explain what corrective measures have been taken to resolve the SNC or the status or progress of any Industry with a schedule or order.
3. Copy of any schedules, consent orders, or administrative orders issued to industries by the towns. Please note that we should be sent a copy of any schedule, or order whenever they are issued or modified.
4. The Pretreatment Performance Summary (PPS) form. This information is necessary so the PERCS Unit can provide data to EPA.

3. Is a telephone log or other verbal NOV OK for notifying Industries of IUP and/or SUO violations?
No. Written NOVs are required as outlined in your Division approved ERP.

Written documentation of violations made by your Industries of their own self-monitoring violations is acceptable, if your ERP allows this and it has been approved by the Division. For instance, if your Industry sends in a written self monitoring report acknowledging the violations and explains the cause of the violation (if known) and corrective measures taken then the POTW does not have to follow up with another NOV letter telling the Industry what the Industry just documented to the POTW in its letter.

4. How do you determine SNC with the following narrative limit? "There shall be no detectable Cyanide."

Remember that you must first identify violations, and then calculate compliance percentage, before you can make a SNC determination.

Since the permit is already in place with the vague narrative limit, what should you consider a violation using existing data? Calculating compliance percentage and making a SNC determination can then follow according to standard guidance.

You should meet with your Industry to negotiate, write out and both sign a mutually agreeable procedure. The procedure should specify the detection level that was or should be obtained by the lab(s), even if variable detection levels were reported. Every value above the specified detection level is a violation, and every value 1.2 times that detection value is a TRC violation. SNC determinations are then made, as with any other limits violation, i.e. >66% regular violations; >=33% TRC violations, passthrough/interference, etc.

POTWs should avoid writing IUPs with vague and unclear limits, conditions, or enforcement requirements in the first place. For example:

The permit could be issued to include either of the following:

- a. a specific numerical limit; or
- b. a specified numerical detection level, with footnotes on the limits page or special conditions explaining that all values above that will be considered a violation, including values reported as <x.xxx, where x.xxx is greater than the required detection level.

5. When calculating an average for the purposes of determining compliance with “average” limits what value should you use for data reported as BDL?

The Division recommends the POTW use “zero.” You may wish to state this directly in the IUP.

The Division uses zero when determining compliance with NPDES monthly and weekly average limits.

If the POTW wishes to use something different (i.e. 1/2 detect, detect, or other), you may, but it must be documented in writing and be sent to the Industry either in a letter, or preferably in the actual permit.

6. What detection level is required for limited parameters?

If the IUP specifies a required detection level, then the required detection level must be met or better (lower) by both the POTW and the SIU, and failure to do so is a violation.

If the POTW’s samples do not have the required detection level and they cannot be used for compliance calculations which causes the SIU to be in SNC, the POTW will be in a very awkward position with their industry.

If the IUP does not specify detection levels, or includes “recommended” detection levels, then use the best (lowest) readily available laboratory detection levels. If the typical concentration is well above that detection level, reliable quantification can be achieved with a higher (less expensive) detection value.

If a detection level exceeds the IUP limit, it is a sampling/reporting violation. Remember, no one should be assessed two violations for one event or missed event. The sample cannot be used for limits compliance judgment at all, or for calculation of average limits. A resample must be collected.

Exceptions may be applicable for some unusual, unavoidable, and documented lab error.

Exceptions may be applicable due to matrix interference, see question and discussion below.

The Division strongly recommends all future IUPs contain required detection levels applicable to the discharge, so these issues will be clear.

6.a. If the detection level is very high, and higher than the IUP limit, due to matrix interference, is BDL still considered compliant?

Yes. If the SIU or POTW can demonstrate that all reasonable efforts have been taken to eliminate or minimize matrix interference, then BDL, even very high BDL values should be considered compliant.

7. What detection level is required if the parameter is never detected?

Use the best (lowest) commonly available laboratory detection levels and sample collection methods. Best detection available is especially important for LTMP and Industrial monitoring for mass balance or uncontrollable data.

If the IUP contains a required detection level, this level must be met by both the POTW and the SIU for industrial monitoring.

8. What are splits? If two samples are collected on the same day, one by the POTW and the other by the Industry, are these two different samples, or are they splits?

They are different samples if they are collected with different samplers, probes, and tubing.

They are splits if they are collected with the same sampler, probe, and tubing. Furthermore, a split is where one party collects a sample, and gives the other party an aliquot of that sample for analysis. The sample “belongs” to the first party and counts toward that party’s required monitoring requirements. For compliance judgment, the results of each split are averaged, and then that average is used for compliance judgment.

See the attached memo for discussion and examples on how to average, identify violations, calculate compliance percentage, make a SNC determination with splits and separate same day samples for permits with both daily and monthly average limits.

9. If splits are not consistent, what do you do?

The Comp Guide, Chapter 7, Section E, page 2, says if samples are widely divergent but pass a QA/QC review, they must both be used, no matter how far apart they are.

For the first inconsistent pair of split samples, you should use them. But if it happens more than once, an investigation or study of the causes of the widely divergent results must be done. Review Comp Guide, Chapter 7, Section E, and EPA’s Industrial User Inspection and Sampling Manual for POTWs, pages 98, 99-101, and Appendix VII.

Appendix VII states:

“In summary, whenever split samples are taken and both properly preserved and analyzed, the POTW should average the results from each sample for determining compliance and appropriate enforcement responses.”

EPA’s manual page 100 states that when:

“ . . . the analytical results of duplicate samples . . . yield significantly different analytical results. If this happens the POTW needs to make a judgment as to whether the sample can be used for compliance status of the IU (e.g. for determining SNC)”

10. What is considered "not consistent" for split samples?

A 20 % difference between results is not uncommon. Regional, laboratory, and EPA staff may have opinions on what is not consistent. The variability also depends on the parameter and the range of concentrations being analyzed for.

The POTW may specify a percentage difference in a letter or in the permit as acceptable for splits.

Even 10 % variability may be considered suspect if the industry sample is always OK and the POTW samples indicate violations.

11. How do you use a certified Lab for pH or temperature? Do the Pretreatment permits require it?

The sample collector measures pH and temperature, lab certification is not always reasonable. Good equipment and calibration (i.e. no pH measurement done with litmus paper), some training, and good record keeping could be required by the POTW.

The model SUO was revised in Section 5.10 to say “. . . or unless otherwise preformed in accordance with procedures approved by EPA or [Town].” to allow field testing of pH and temperature without the

necessity of lab certification. The following condition in the Generic IUP may be modified to indicate that pH and temperature can be performed without laboratory certification.

Part III, 4 Certified Laboratory Analysis. Pollutant analysis shall be performed by a North Carolina Division of Water Quality Certified Laboratory that is certified in the analysis of the pollutant in wastewater. *Temperature and pH analysis may be performed for compliance purposes without a laboratory certification by following the procedures outlined [below; or in Section XX of the permit; or in a separate SOP document].*

12. How should Non-SIUs be permitted or controlled?

Non-SIUs may be controlled by the Sewer Use Ordinance, by a letter or by a local permit.

Local permits may be of any format; however, it is recommended that they look similar to SIU Pretreatment Permits. Non-SIU permits do not have to be submitted to DWQ for review or approval, or be put on the allocation table.

13. What happens if permits are submitted along with the most recently completed annual inspection form, but by the effective date of the permit, the inspection is more than 12 months old?

Per 15A NCAC 2H .0916(c)(3)(C), “The control authority staff shall include documentation of the most recent onsite inspection of the industrial user and any existing wastewater pretreatment system as part of the permit record for new and renewed permits.”

The Federal pretreatment rules (40 CFR 403.8(f)(2)(v)) require POTWs to inspect all SIUs at least once a year. The Division will check for documentation of annual industrial inspections during PCIs and Audits. The POTW must also report the number of inspections performed on the PPS form in the PAR.

Thus, the interval between your annual inspections may exceed 12 months, for example, if in 2010, the annual inspection is conducted in February, whereas in 2011 the inspection is done in April. Or if a SIU qualifies as a Middle-Tier SIU, inspection requirements are only once every two years.

If permits are prepared and signed (i.e. “issued”) well in advance, the effective date and the Division’s review usually will follow the date they are signed (“issued”). The effective date and the Division’s date of review are not a factor in determining the POTW’s compliance with 15A NCAC 2H .0916(c)(3).

If during the Division’s permit review the inspection is more than 12 months old, we may ask to see any available more recent inspections to determine more current conditions, so that we may better advise the POTW of the adequacy of the IUP. The Division would not consider the POTW to be in violation in any way.

The Division strongly recommends that SIUs in SNC should be inspected more often than once per year.

14. It is discovered that a 3-year permit was extended for 3 more years. What should be done?

The permit is more than 5 years in duration, which is a violation of 15A NCAC 2H .0916(c)(5)(C).

The IUP must be modified ASAP to change the expiration date to no greater than 5 years from the original effective date.

If the three-year extension were really meant to be a permit re-issue or permit renewal, the answer would be different. To be considered a re-issue or renewal, it would have to be submitted to the Division for review with a completely new application form, data summary, and inspection form, with an evaluation of what parameters needed to be limited or monitored. More info on this question is included in the IUP permit writing workshops.

15. When are limits required in pretreatment permits?

This question needs a lot of discussion and is covered in detail at IUP permit writing workshops. See the Local Limits Procedure in the Comp Guide Chapter 6, Appendix 6-E, Section 3.1

An oversimplified answer without discussion or explanation is:

- a. Limits are required if a limit is required by a categorical pretreatment standard.
- b. Limits are required if an industry discharges a pollutant loading that equals or exceeds 5% of the NPDES or non-discharge permitted flow limit or organic capacity of the POTW treatment plant (in this context, organic capacity refers to BOD, TSS and ammonia), unless there is a documented and approved Headworks Analysis demonstrating excess treatment capacity at the POTW and a limit is not needed to protect the POTW.
- c. Depending on the definition of SIU in the local SUO, limits may be required if an industry discharges a pollutant loading that equals or exceeds 5% of other pollutants of concern.

16. How are samples that are missed, or are invalid due to chain of custody, or 40 CFR 136 requirements used in compliance judgment, and subsequent SNC determination?

They are reporting violations and should be enforced as required in the ERP.

They should not be used for calculation of limits violations.

17. Is the resample and report within the 30 days of becoming aware of a violation used for compliance judgment for limits violations or for SNC determination?

Samples must ONLY be used for daily max, monthly average, etc. compliance calculations for the day, month, quarter, etc., compliance period in which they are actually collected in.

Re-samples must ONLY be used for the compliance period in which they are collected.

Samples and Re-samples must ONLY be used for SNC determination for the 6-month compliance period they are actually collected in.

Composite samples are typically considered to be collected on the day the sample is completed or commenced. Regulations and guidance contradict each other.

Example: You violate a BOD limit in March, so you resample in April. Can the April sample be used to judge compliance for the March monthly average limit for BOD? No, re-samples cannot be used retroactively for compliance judgment for the period in which the original sample caused a violation. The April sample is used for compliance judgment for the April limits.

18. Must a single minor reporting violation be considered SNC and public noticed?

Technically, yes. As specified in federal regulations 40 CFR 403.8(F)(2)(VII)(F) & (G) and in North Carolina State regulations 0.0903(34)(F) and (G), respectively, "Failure to provide within 45 days after the due date, required reports" and "Failure to accurately report noncompliance."

In actual practice, no.

After much discussion with other states, EPA, and many municipalities there is general consensus that minor non-habitual, non-recurring reporting mistakes should not always be considered SNC. Is a minor reporting error or oversight worse than limit violations up to 65% of the time? (No reasonable person thinks so.)

Generally, we have allowed some flexibility to the POTW to use your best professional judgment regarding individual non-repetitive reporting violations and whether they constitute a real SNC situation and merit public notice. Document the reasons for your decision.

Failure by the SIU to report everything as required is still a violation and NOV's must be issued, and enforcement actions must be taken according to your ERP with penalties assessed and collected.

Any missed samples must be made up. There should be no cost savings to the Industry for not performing required sampling, analysis and reporting.

As always, if you have any questions or special circumstances, call the Division of Water Quality's pretreatment staff.

19. Is there a regulatory reference that gives the local POTW the authority or discretion to consider a reporting violation to not be SNC?

No, see other questions and discussion related to SNC.

20. What strategies or policies have been used by POTWs for deciding when an Industry should be considered SNC for reporting and public noticed?

One proposal is the so called "Warn me, first" policy.

If a basically good, compliant industry has a minor reporting violation, they get a warning in their NOV which includes the following reminder:

"Reporting violations are considered Significant Non-Compliance (SNC) by state and federal pretreatment regulations and will result in public notice. Please review all the monitoring and reporting requirements in your pretreatment permit and be aware that even a single minor late or missed requirement will result in Significant Non-Compliant (SNC) status and public notice. If you have any questions please contact the local pretreatment coordinator."

If the same industry then repeats a reporting violation they would be considered SNC and put in public notice.

If a POTW were concerned about third party, EPA, or Division enforcement actions, they may wish to go ahead and issue this warning/reminder to all of their industries in a letter or newsletter. This reminder could even be sent to all of your industries every year to make sure new staff are aware of the importance and consequences of reporting.

21. Does the permit history start over when the permit is re-issued, renewed, or renamed?

No. This is covered in detail in the permit writing workshop.

IUPs do not have to be revised now just to include a history. We will expect a history with any new and modified permits submitted to the Division.

The IUP's history does not have to be created for past events and modifications. Once begun, simply update the history each time it is changed with all subsequent modifications, renewals, etc.

22. Does the permit history have to be inside the permit?

No. But a copy of the permit history should be submitted with all permit modifications and renewals.

23. When you have an industry with a daily limit and a monthly average limit, which do you put into the allocation table?

Put the monthly limit in the Allocation table.

(Comp Guide, Chapter 6, Sec. C, page 2)

24. What should a POTW do if an Industry will not sign a Consent Order, or Schedule of Compliance?
First attempt to negotiate on any reasonable requests by the SIU for revision of the Consent Order.

If that is not successful, then issue them an Administrative Order, which they do not have to sign. See Section 8.1(d) of the Model SUO. They will probably appeal the Administrative Order as allowed under Section 10 of the Model SUO, but at least the strategy of endless stalling may be resolved sooner.

25. If POTW monitoring of an Industry indicates a violation, does the POTW have to re-sample?

No. But, if the violation will cause the industry to be in SNC, the POTW should notify the Industry immediately to let them know. This provides the industry an opportunity to address the situation as soon as possible, including resolving the violations and possibly collecting sufficient samples after returning to compliance so as to avoid being in SNC for the six month period.

This can be in a promptly issued NOV, but if the NOV will be delayed, the POTW should at least call the SIU to let them know as soon as possible, especially if waiting until the written NOV would hamper the SIU's ability to address the situation.

In any case, as with all violations, the POTW must notify the SIU per the ERP.

26. Are PAR Narratives required for all SIUs or only for SIUs that are in SNC?

Narratives are required only for SIUs in SNC, or on orders.

Narratives are not required for every other Industry, however sometimes important things have happened at industries that were not in SNC, such as so-and-so industry has installed or improved their pretreatment equipment.

Some POTWs have been listing Industries under general descriptive phrases, such as:

“The following industries had no violations.”

or

“The following industries had some violations but were not in SNC.”

27. Can I take photos of my industry's pre-treatment works or discharge?

Yes. Refer to General Statute 143-215.3, "for investigating the condition of any waters and the discharge therein of any sewage, industrial waste . . ."

28. Are copies of Industrial inspections required in the annual reports, per 40 CFR 403.12 (i)(3)? State regulations do not require copies of all industrial inspections to be included in the PAR. It is required that the number of SIUs not inspected be reported on the PPS form in the PAR.

However, if your POTW is concerned with third party suits and/or with satisfying this part of the federal reporting requirements, please only include a list of your SIUs and the date you inspected them. We do not have space or need copies of every industrial inspection every year. We will always request copies of inspections when we need them, and we get copies of industrial inspections when permits are renewed.

29. If you modify your ERP during the compliance period, what should the POTW do?
Follow the ERP that was in effect at the time of the violation.

You must promptly notify your industries of any changes to your ERP.

The POTW cannot adopt a retroactive ERP, meaning if the ERP is developed in March of 2011, it cannot be used for January or February 2011 violations. When preparing, developing or revising an ERP, it is strongly recommended that the POTW establish a specific effective date for that ERP and include this date in the ERP itself, so that this will be clear to all parties, i.e., the POTW, the SIUs, and the Division.

30. Is FOG the same as O&G? What values should be used for TRC?

FOG is Fats Oils & Grease, O&G is Oil and Grease, and until we get told different you may consider them the same. Use 1.4 for TRC.

31. If an industry changes name, do you do separate compliance judgment, SNC determination, IDSF, and Narrative (if needed)?

With most name changes, the "New" Industry continues to have the same people, the same process, chemicals, the same pretreatment, the same IUP number and IUP requirements, and same discharge, but simply with a different name. In this case, the name change has no real effect on compliance judgment, SNC, IDSFs, or anything except their name.

In this type of situation, we recommend that the POTW put all data together and evaluate compliance, SNC, IDSF and Narrative (if needed) only once. Refer to the "New" SIU as "*New Company Name (formerly Old Company Name)*".

If you have already prepared your PAR for this year and have evaluated them separately, you do not have to redo them.

However, if either the old name or new name is in SNC please explain in the narrative. And if the old company was SNC for the first period and the new company was SNC for the second period you essentially have a company that has been SNC for two periods in a row and needs to be on an order. Please discuss with the pretreatment staff.

If the Industry insists, or the POTW wants to treat the two as totally separate, the old permit must be rescinded and the new company must formally apply for and obtain a totally new permit, with a new permit number.

More discussion of this is included in the IUP workshop.

32. Is flow considered a pollutant?

No. Flow is typically a limited parameter.

If flow is a limited parameter in the IUP, it must be evaluated for compliance and appropriate enforcement taken as outlined in the POTW's Division approved ERP. Please see Comp Guide, Chapter 7, Section 7-E, for additional guidance. Note the following question about SNC for flow.

33. If flow data is collected every workday of the entire month, must it all be used for compliance with daily max and monthly average limits? What if flow meter strip charts are used and submitted, must they be used for compliance calculations?

Yes, you should do what the current permit says. The monitoring frequency for flow as specified in the permit should be followed, and used to identify violations.

Any data collected at the designated sampling point in the manner required by the permit must be used for compliance judgment.

33a. What about sampling performed at the designated sampling point as process control (i.e. sampling not performed in the manner required by the permit, by certified lab or correct sample method)?

EPA's Industrial User Inspection and Sampling Manual for POTWs includes a memo on the use of grab samples to detect violations of pretreatment standards (October 1992) which states "Where grab samples are used as a screening tool only (i.e., consistent compliance has been demonstrated by composite data), the results should not be used in the POTW's calculation of significant noncompliance (SNC)."

34. Is SNC for flow required?

The POTW is not required to apply the "chronic" and "TRC" definitions of SNC for flow since these definitions use the term "pollutant."

However, the other criteria for SNC determination should still be applied to flow, including the following sections of, 15A NCAC 02H .0903(34):

(C) Causing pass through or interference

(D) Endangerment or emergency shutdown

(E, F, G) Reporting (see our previous notes on reporting)

(H) Any other violation or group of violations that the control authority or POTW determines will adversely affect the operation or implementation of the local pretreatment program.

The POTW must still identify all flow violations, send NOVs, and enforce flow limits in permits. The ERP must be followed, and the SIU must "resolve" the violations, which means that ongoing chronic violations of flow limits are not acceptable. The Division requires the POTW take whatever actions that

are necessary to ensure the SIU returns to compliance with flow limits, i.e. enforcement, orders, permit modification, etc.

35. If the POTW decides on their own to apply a definition of SNC to flow, how is SNC for flow determined?

We recommend treating flow like any other limited parameter:

>66% violations result in SNC as a chronic violator

>=33 % TRC violations result in SNC, using a conventional TRC multiplier of 1.4

The POTW may adopt their own policy for SNC for flow. Please provide the Division with information on what your policy will be.

36. If permits have Daily flow limits and the Industry has only monthly water supply meter readings divided by the number of workdays in the month, is this acceptable?

No. But, for existing permits that are out there with monthly meter readings, the sample collector must read the water supply meter at the beginning and end of the sample collection period and convert these readings to a daily discharge flow estimate. This should be stated in the IUP. See Comp Guide, Chapter 6, Appendix 6-B, Part III, 3, second wording section.

If flow compliance is an important issue with IUPs that are already issued without proper explanation and detail about flow measurement, then the IUP should be modified ASAP to remedy the flow compliance situation.

There are some rare circumstances where using monthly water supply meter readings divided by the number of work days to estimate a daily flow is not absolutely prohibited and unreasonable. This depends on many things including the following:

Are supply meter(s) accessible, safe and easy to read?

Are effluent flow meters not practical?

Are operations and discharges regular and predictable?

Are deductions being claimed or granted for water losses?

There are Division approved IUPs that do allow this; however, when they are renewed or modified they should include an explanation on why that method of flow estimation is adequate, including specific details and why a better method of flow measurement will not be required.

36a. If the city uses discharge flow meter data for surcharges, can the city legally deny use of that same flow data for compliance judgment? If a city uses only water supply meter readings for surcharge, can they elect not to use that same flow data for compliance?

The answer to both questions depends on many specific details.

You can legally do what makes sense, what is technically defensible, what is consistent, what has been documented in writing, what is in the permit, and hopefully what has been negotiated in good faith with the industry.

Flow data is site specific and industry specific, so what makes sense at one industry may not work at another. Flow values used for surcharge and compliance may be different. What are industrial losses? What are total industrial sources of flow and loadings? Where are the meters? Are there industrial I/I

flows? Are there unknown pipes and connections? What is the condition and calibration history of the meters? What is the total water mass balance of the site and process?

The city and Industry should negotiate and document in writing in detail with examples using past data what flow data will be collected and how it will be used for both surcharge and compliance purposes. Data may be excluded from surcharge calculations if the written surcharge procedure allows it (i.e. if a value is ± 3 s.d., toss out the two high values and two low values and average the rest, etc.). The surcharge calculations are totally flexible, and may be changed without the Division's review and approval.

Data may NOT be ignored from compliance determination unless there is a known and documented reason.

Using different flows for surcharge and compliance may be appropriate, especially if there are combined waste streams, categorical flows, industrial losses of water prior to the sampling point, domestic or other waters that are not pretreated, etc.