State of North Carolina
Department of Environment
and Natural Resources
Division of Water Quality

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NCDENR

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

November 17, 1998

MEMORANDUM

To: Pretreatment Program Contacts
From: Tom S. Poe, Pretreatment Unit Supervisor
Subject: Compliance Judgement Scenario

The first scenario:
POTW collects sample A from 10 am on day 1 to 10 am on day 2. SIU also collects their own sample B from 8 am on day 1 to 8 am on day 2. Assume both samples comply with all required sampling, preservation, and analytical methods. The Industrial User Pretreatment Permit (IUP) has a Daily Maximum limit for parameter X. How should one judge compliance?

Answer:
First, the sample A results are used for compliance judgement with the Daily Maximum IUP limit, with one CJP and the possibility of one violation, with associated TRC violation if applicable. Second, the sample B result is used for compliance judgement with the Daily Maximum IUP limit and associated TRC Limit if applicable, with one Compliance Judgement Point (CJP) and the possibility of one violation, with associated TRC violation if applicable. For sampling activities on day 2, there are two CJPs and the possibility for two violations of the Daily Maximum IUP limit, with two associated TRC violations if applicable. (See attached SNC with Limits Example I).

The second scenario:
POTW collects sample A from 10 am on day 1 to 10 am on day 2. SIU gets a split of this sample. SIU also collects their own sample B from 8 am on day 1 to 8 am on day 2. Assume all samples comply with all required sampling, preservation, and analytical methods. The Industrial User Pretreatment Permit (IUP) has a Daily Maximum limit for parameter X. How should one judge compliance?

Answer:
First, apply the normal procedure for split samples to sample A and it's split. Average the results together and use this value for compliance judgement with the Daily Maximum IUP limit and associated TRC Limit if applicable. There is one CJP and the possibility of one violation, with associated TRC violation if applicable. Second, the sample B result is used for compliance judgement with the Daily Maximum IUP limit and associated TRC Limit, with one Compliance Judgement Point (CJP) and the possibility of one violation, with associated TRC violation if applicable. Thus for day 2 sampling activities, there are two CJPs and the possibility for two violations of the Daily Maximum IUP limit, with two associated TRC violations if applicable. (See attached SNC with Limits Example II).

<u>For either scenario:</u>
Please note this applies to all parameters except pH. This includes composite samples for BOD, TSS, metals, etc., as well as grab samples for Oil and Grease, Cyanide, etc. For pH, results cannot be averaged, so for the second scenario, there would be no averaging of the results from the splits. Essentially, for pH there can be no splits. There will be 3 results for use in compliance judgement with the pH IUP limit, and the possibility of three violations of the pH IUP limit.

If there are two violations on the same day based on the above listed scenarios, both violations must be listed in the Notice of Violation. It is not required that there to be two separate NOVs. Also note 40 CFR 403.8(f)(vi) and the Division's Model Sewer Use Ordinance, Section 8.2(a), refer to the ability to assess $XXXX per violation per day. Therefore if an SIU has two violations on the same day based on the above scenarios, the POTW may determine that two penalties must be assessed if implementation of the POTW's Division approved Enforcement Response Plan (ERP) indicates penalties are needed. The POTW may also determine that only one penalty is needed.

<u>General Guidelines:</u>
Splits are averaged, then the average is used for compliance judgement. Separate samples are NOT splits. They are separate samples, even if they are set up on the same day or even at the same time. Samples are dated on the day the sample collection is stopped. SIU's should be notified in writing if they are subject to multiple violations and/or multiple penalty assessments for the same parameter on the same day.

<u>Other Options:</u>
The POTW may issue an IUP with a Daily <u>Average</u> Limit instead of a Daily Maximum Limit. If this is the case, the first scenario would be addressed as follows: The sample A results are averaged with the sample B result and this average is used for compliance judgement with the Daily Maximum IUP limit, with one CJP and the possibility of one violation, with associated TRC violation if applicable. (See attached SNC with Limits Example III). The second scenario would be addressed as follows: The sample A results and the "split of sample A" results are averaged together. This value is then averaged with the sample B result and this average is used for compliance judgement with the Daily Maximum IUP limit, with one CJP and the possibility of one violation, with associated TRC violation if applicable. (See attached SNC with Limits Example IV).

<u>Related Matters:</u>
Scenario: An IUP has a Daily Maximum IUP limit expressed in mg/l and a separate Daily Maximum IUP limit expressed in lbs/day for the same parameter. For each sample result and it's associated lbs/day result, there are two CJPs, one CJP for comparison of the mg/l result to the mg/l limit and it's associated TRC limit if applicable, and the second CJP for the comparison of the lbs/day result to the lbs/day IUP limit and its associated TRC limit if applicable. If splits are collected, the mg/l results are averaged, and then the lbs/day result is calculated. There are two CJPs. If two samples are collected in the same day, for example the first scenario above, compliance judgement is applied to both samples and there are four CJPs. (See attached SNC with Limits Examples V and VI).

Thank you for your continued cooperation with the pretreatment program. If you have any questions or comments, please contact me at (919) 733-5083 (ext. 522).

drf/memo.two.samples.same.day
cc: Pretreatment Unit
        Regional Office Pretreatment Contacts

Compliance Judgement Worksheet For SNC With Limits | Page 1

Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each Pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: **BOD**	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ____ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: ____350____ * 1.2 or (1.4) = TRC Daily Limit: ____490____ (mg/l) or lbs/day

_____ Average Limit: _____ * 1.2 or 1.4 = TRC Avg. Limit: _____ mg/l or lbs/day

Column 1:   I - Industry self   P-POTW   A - Average

Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.

Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).

Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).

Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."

Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."

Column 10:   Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc. mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation?	Col 10: TRC Violation?
P	10/14/98	0.388	393				1	1	0
I	10/14/98	0.358	320				1	0	0
I	11/4/98	0.273	301				1	0	0

Sample A ?am-10am

Sample B 8am-8am

EXAMPLE 1

List these Totals on next page =>   A = 3   B = 1   C= 0

Compliance Judgement Worksheet For SNC With Limits

Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each Pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: **BOD**	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ____ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: _____ **350** _____ * 1.2 or (1.4) = TRC Daily Limit: _____ **490** _____   (mg/l) or lbs/day

_____ Average Limit: _____ _____ * 1.2 or 1.4 = TRC Avg. Limit: _____ _____   mg/l or lbs/day

Column 1:   I - Industry self   P-POTW   A - Average

Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.

Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).

Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).

Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."

Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."

Column 10:   Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc. mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation ?	Col 10: TRC Violation ?
P	10/14/98	0.388	393						
P / I			320	366.5			1	1	0
I	10/14/98	0.358	320				1	0	0
I	11/4/98	0.273	301				1	0	0

Sample A 10am-10am

Split of Sample A

Sample B 8am-8am

EXAMPLE 2

List these Totals on next page => | A = 3 | B = 1 | C = 0

Compliance Judgement Worksheet For SNC With Limits

Page 3

Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each Pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: **BOD**	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ____ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: _____350_____ * 1.2 or (1.4) = TRC Daily Limit: _____490_____ (mg/l) or lbs/day

_____ Average Limit: _____ * 1.2 or 1.4 = TRC Avg. Limit: _____ mg/l or lbs/day

Column 1:   I - Industry self   P-POTW   A - Average

Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.

Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).

Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).

Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."

Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."

Column 10:   Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc, mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation ?	Col 10: TRC Violation ?
P	10/14/98	0.388	393						
				356.5			1	1	0
I	10/14/98	0.358	320						
I	11/4/98	0.273	301				1	0	0

Sample A 10am

Sample B 8am-8am

EXAMPLE 3

List these Totals on next page =>   A = 2   B = 1   C = 0

Title: SNC With Limits Compliance Judgement Worksheet
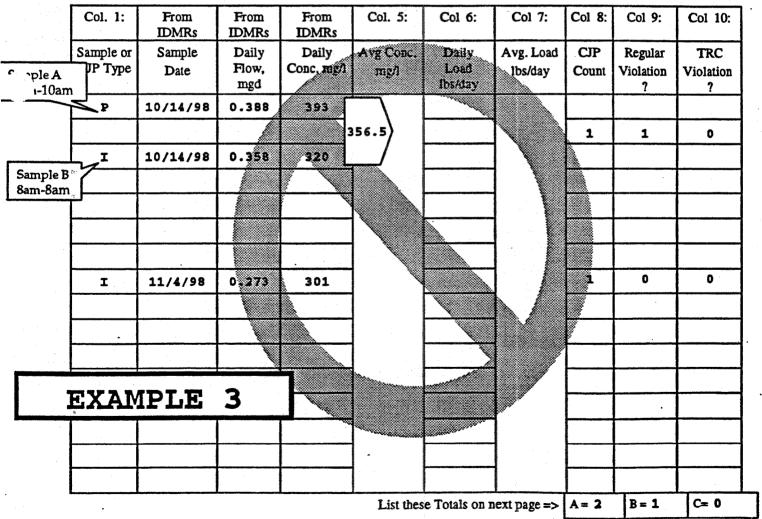
File name: Comrcomp.judg

Compliance Judgement Worksheet For SNC With Limits

Page 4

Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each Pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: BOD	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ___ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: ___350___ * 1.2 or (1.4) = TRC Daily Limit: ___490___   (mg/l) or lbs/day

_____ Average Limit: _____ * 1.2 or 1.4 = TRC Avg. Limit: _____   mg/l or lbs/day

Column 1:   I - Industry self   P-POTW   A - Average

Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.

Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).

Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).

Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."

Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."

Column 10: Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc. mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation ?	Col 10: TRC Violation ?
P	10/14/98	0.388	393						
P				366.5					
I	10/14/98	0.388	340						
I	10/14/98	.350	320		343.25		1	0	0
I	11/4/98	0.273	301				1	0	0

Sample A 10am-10am

Split of Sample A

Sample B 8am-8am

EXAMPLE 4

List these Totals on next page => | **A = 2** | **B = 0** | **C = 0**

Compliance Judgement Worksheet For SNC With Limits   Page 5

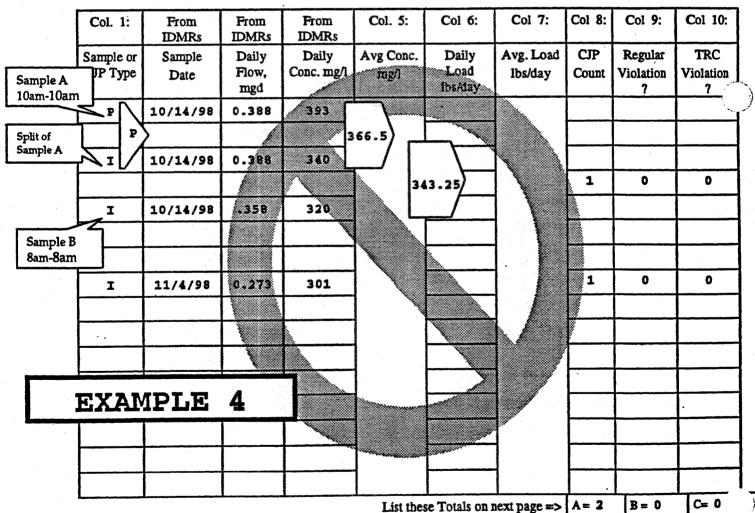Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each Pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: **BOD**	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ____ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: ___350___ * 1.2 or (1.4) = TRC Daily Limit: ___490___ (mg/l) or lbs/day
~~Daily~~ ~~Average~~ Limit: ___1168___ * 1.2 or (1.4) = TRC Avg. Limit: _1635.2_ mg/l or (lbs/day)

Column 1:   I - Industry self   P-POTW   A - Average
Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.
Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).
Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).
Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."
Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."
Column 10: Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc. mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation ?	Col 10: TRC Violation ?
P	10/14/98	0.388	393		1271.72		2	2	0
I	10/14/98	0.358	320		955.4		2	0	0
I	11/4/98	0.273	301		685.3		2	0	0

Sample A ...-10am

Sample B 8am-8am

EXAMPLE 5

List these Totals on next page => | A = 6 | B = 2 | C= 0 |

Title: SNC With Limits Compliance Judgement Worksheet
File name: Compcomp.judg
Revision data: 1/8/98

Compliance Judgement Worksheet For SNC With Limits

Use separate sheets for each Industry   SNC determination for Flow optional, see Section 7-E   Use separate sheets for each pollutant

SIU Name:	IUP Number:	Pipe Number:
Parameter: **BOD**	Six Month SNC Determination Period:	

See next page for definitions

Daily Max. and ___ Ave. Limits from IUP	IUP Limit * TRC criteria = TRC Limit Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants TRC compliance judgement not required for pH:	Circle which units apply to Limits

Daily Maximum Limit: ___350___ * 1.2 or ⟨1.4⟩ = TRC Daily Limit: ___490___   (mg/l) or lbs/day

Daily Average Limit: ___1168___ * 1.2 or ⟨1.4⟩ = TRC Avg. Limit: ___1635.2___   mg/l or (lbs/day)

Column 1:   I - Industry self   P-POTW   A - Average

Column 5:   Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected wtihin the "average" period (for example, for a monthly average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as another CJP. Compare this average to the appropriate average IUP limit or TRC limit.

Column 6:   Use only if IUP has daily limits in lbs/day. Formula to use is (mgd * mg/l * 8.34 = lbs/day).

Column 7:   Use only if IUP has (monthly?) average limits in lbs/day. Use (mgd * mg/l * 8.34 = lbs/day).

Column 8:   Put "1" for each daily maximum or average value, tally up at bottom as "A."

Column 9:   Compare daily and average values to IUP limits above, put "0" if at or below limit, "1" if above, tally at bottom as "B."

Column 10: Compare daily and average values to TRC limits above, put "0" if below limit, "1" if at or above, tally at bottom as "C."

Col. 1: Sample or IUP Type	From IDMRs Sample Date	From IDMRs Daily Flow, mgd	From IDMRs Daily Conc. mg/l	Col. 5: Avg Conc. mg/l	Col 6: Daily Load lbs/day	Col 7: Avg. Load lbs/day	Col 8: CJP Count	Col 9: Regular Violation ?	Col 10: TRC Violation ?
P	10/14/98	0.388	393						
				366.5	1186		2	2	0
I			340						
I	10/14/98	0.358	320		955.4		2	0	0
I	11/4/98	0.273	301		685.3		2	0	0

Sample A 10am-10am

Split of Sample A

Sample B 8am-8am

EXAMPLE 6