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

James B. Hunt, Jr., Governor Wayne McDevitt, Secretary A. Preston Howard, Jr., P.E., Director



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).

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For either scenario:

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 \$XXXXX 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.

General Guidelines:

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.

Other Options:

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).

Related Matters:

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

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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 TUP Limit * TRC criteria = TRC Limit Circle which units apply Ave. Limits Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants to Limits from IUP TRC compliance judgement not required for pH: 350 Daily Maximum Limit: = TRC Daily Limit: _ (mg/l) or lbs/day Average Limit: = TRC Avg. Limit: _ mg/l or lbs/day Column 1: I - Industry self P-POTW A - Average Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected within the Column 5: "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 CIP. 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: From From From Col. 5: Col 6: Col 7: Col 8: Col 9: Col 10: **IDMRs IDMRs IDMRs** Sample or Sample Daily Daily Avg Conc. Daily Avg. Load CJP Regular TRC JP Type Flow. Date Conc. mg/l Load mg/l lbs/day Count Violation Sample A Violation mgd lbs/day m-10am 7 10/14/98 0.388 1 1 393 0 I 1 10/14/98 0.358 320 Sample B 8am-8am I 11/4/98 0.273 1 0 0 301

C= 0

B = 1

List these Totals on next page \Rightarrow A = 3

EXAMPLE

C= 0

B = 1

A= 3

List these Totals on next page =>

Sample or Sample Daily Flow, mgd Doily Conc. mg/l mg/l Load lbs/day P 10/14/98 0.388 393 1 1 0 0 0		_	ance Judg						77	insta shaate fo	Page 2
Parameter: BOD Six Month SNC Determination Period:	L	Use separate sl	heets for each Indu	ıstry	SNC determin	ation for Flow or	tional, see Sect	10N /-E	Use set	arate meets to	each Four
Six Month SNC Determination Period:	ſ	SIU Name:		. '		IUP I	Yumber:		Pipe	Number:	
Daily Max. and Ave. Limits Ave. Limits from IUP Daily Maximum Limit: 350 * 1.2 or 14 Average Limit: * 1.2 or 14 Average Limit: 1 - Industry self Column 1: I - Industry self Column 5: Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected within a calendar month) and enter this average in column 5. Trast this average limit, use all values collected within a calendar month) and enter this average in column 5. Trast this average as mother CP. Compare this average to the appropriate average IUP limits or TRC limit. Column 6: Use only if IUP has (monthly)? average limit in lbs/day. Use (mgd *mg/l * 8.34 = lbs/day). Column 7: Use only if IUP has (monthly?) average limit in lbs/day. Use (mgd *mg/l * 8.34 = lbs/day). Column 8: Put 11 for each daily maximum or average value, tally up at bottom as 7. Column 9: Put 13 for each daily maximum or average value, tally up at bottom as 7. Column 9: Compare daily and average values to IUP limits above, put 10 if at or below limit, 11 if above, tally at bottom as 7. Column 10: From From From Prom Col. 5: Col 6: Col 7: Col 8: Col 9: Col 16 DDMRs DDMRs DDMRs DMRs Sample or Sample Daily Daily Avg Conc. Daily Avg. Load CJP Regular TRC Date Flow, Conc. mg/l mg/l lbs/day Count Violation Violation mg/l 1 10/14/98 0.358 393 T 110/14/98 0.358 393 T 10/14/98 0.358 393 T 10/14/98 0.358 393 T 10/14/98 0.358 320 T 10 0 0		Parameter:	BOD			Six M	ionth SNC I	Determination	Period:		
Ave. Limits from IUP Circle 1.4 For TRC for BOD, TSS, oil, fat, grease; Circle 1.2 for all other pollutants Daily Maximum Limit: 350 * 1.2 or 1.4 = TRC Daily Limit: 490 mg/l or Ibs/day Average Limit: * 1.2 or 1.4 = TRC Avg. Limit: mg/l or Ibs/day or Ibs/day Average Limit: * 1.2 or 1.4 = TRC Avg. Limit: mg/l or Ibs/day or Ibs/day if IUP has (monthly, or other?) average limit. Average values of all sampling events collected within the saverage in column 5. Tract this average is as mother CP. Compare this average in the appropriate average IUP limit or TRC limit. Column 6: Use only if IUP has daily limits in Ibs/day. Formula to use is (mgd *mg/l * 8.34 = Ibs/day).		See next page	e for definitions								
Daily Maximum Limit: Average Limit: * 1.2 or 1.4 = TRC Daily Limit: Mg/l or lbs/day		Ave.	Limits Circ	le 1.4 For TR	C for BOD, T	SS, oil, fat, grea	se; Circle 1	.2 for all other	pollutants		
Column 5: Use only if IUP has (monthly, or other?) average limit. Average values of all sampling events collected within a calendar month) and enter this average period (for example, for a month) average limit, use all values collected within a calendar month) and enter this average in column 5. Treat this average as mother CIP. Compare this average to the appropriate average IUP limit or TRC limit. Column 6: Column 7: Column 8: Column 9: Column 19: Column 10: Column 10: Column 10: Compare daily maximum or average value, tally up at bottom as "A." Column 10: Compare daily and average values to TRC limits above, put "0" if at or below limit, "1" if above, tally at bottom as "C." Col. 1: From From From From Col. 5: Col. 6: Col 7: Col 8: Col 9: Col 10: IDMRs IDMRs IDMRs Sample or Sample Daily Daily Avg Conc. Daily Avg. Load Ibs/day P Date Flow, Conc. mg/l mg/l lbs/day 1 10/14/98 0.388 393 T 10/14/98 0.388 393 T 10/14/98 0.388 393 T 11/4/98 0.358 320 1 0 0 T 11/4/98 0.358 320		•			* 1.2 0	T $=$ T	RC Daily Li	mit: 490			•
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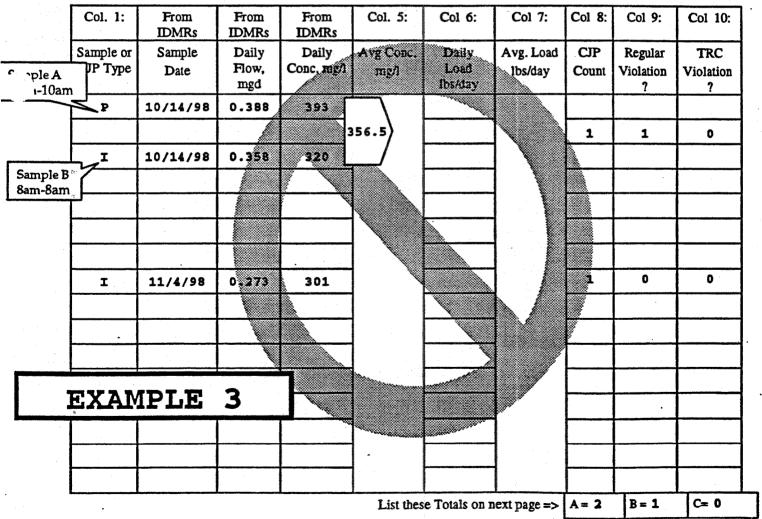
Compliance Judgement Worksheet For SNC With Limits Use separate sheets for each Industry SNC determination for Flow optional, see Section 7-E Use separate sheets for each Pollutant SIU Name: Page 3 Use separate sheets for each Pollutant

Six Month SNC Determination Period:

See next page for definitions

Parameter: BOD

Daily Max. and Ave. Limits from IUP Circle 1.4		Circle 1.4 For T	IUP Limit * TRC criteria RC for BOD, TSS, oil, fat, greas TRC compliance judgement n	e; Circle 1.2 for all other p	ollutants	Circle which units appl to Limits
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			Treat this average as another CJ	P. Compare this average to	the appropr	iate average IUP limit
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Column 6: Column 7:	or TRC I Use only	mit. if IUP has daily li	and the state of the state of the state of	is (mgd * mg/l * 8.34 = lb	os/day).	iate average IUP limit
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Column 7:	or TRC 1 Use only Use only Put "1" for	mit. if IUP has daily li if IUP has (month or each daily maxi	imits in lbs/day. Formula to use hly?) average limits in lbs/day. U	is (mgd * mg/l * 8.34 = lb lse (mgd * mg/l * 8.34 = l at bottom as "A."	os/day). bs/day).	



Compliance Judgement Worksheet For SNC With Limits

Page 4

Use separate sheets for each Industry

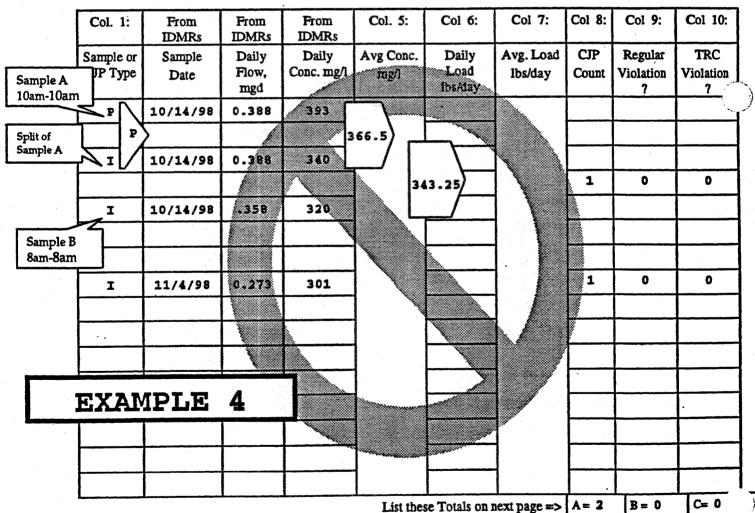
SNC determination for Flow optional, see Section 7-E

Use separate sheets for each Pollutant

SIU Name:	TUP Number:	Pipe Number:	
Parameter: BOD	Six Month SNC Determination Per	iod:	1

See next page for definitions

Daily Max. andAve. Limits from IUP		Circle 1.4 For TI	C for	UP Limit * TRC BOD, TSS, oil, for compliance judg	ai, grease;	Circle 1.2 f		utants	Circle which units apply to Limits
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Compliance Judgement Worksheet For SNC With Limits

SNC determination for Flow optional, see Section 7-E

Use separate sheets for each Pollutant

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SIU Name: IUP Number:			
SIU Name:	•	IUP Number:	Pipe Number:
Parameter: BOD		Six Month SNC Determination Per	iod:

See next page for definitions

Ise separate sheets for each industry

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 within 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."

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Sample or UP Type	Sample Date	Daily Flow, mgd			Load lbs/day	Avg. Load lbs/day	Count	Violation ?	Violation ?	
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Compliance Judgement Worksheet For SNC With Limits

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Use separate sheets for each Industry

SNC determination for Flow optional, see Section 7-E

Use separate sheets for each ollutant

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

See next page for definitions

Daily Max. andAve. Limits from IUP	for BOD, TSS, oil,	C criteria = TRC Limit fat, grease; Circle 1.2 for all other pollutants gement not required for pH:	Circle which units apply to Limits
Daily Maximum Lir Daily Average Li	* 1.2 or 1.4 * 1.2 or 1.4		ng/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 within 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."

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	Col. 1:	From IDMRs	From IDMRs	From IDMRs	Col. 5:	Col 6:	Col 7:	Col 8:	Co1 9:	Col 10:
	Sample or IP Type	Sample Date	Daily Flow,	Daily Conc. mg/l	Avg Conc. mg/l	Daily Load	Avg. Load lbs/day	CJP Count	Regular Violation	TRC Violation
Sample A 10am-10am		Date	mgd		mg/1	lbs/day	103/04/	Count	7	7
	Z P	10/14/98	0.388	393						
Split of	1			3	66.5	1186		2	2	0
Sample A				340						
	I	10/14/98	0.358	320		955.4		2	0	0
Sample B										
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