CHAPTER ONE – RULES AND REGULATIONS

1 Where can you find federal pretreatment regulations?

2 What are the objectives of the pretreatment program?

3 Where can you find North Carolina pretreatment regulations?

4 Who has the final word concerning discharge limits, program management and any part of the pretreatment program?

5 Define Control Authority & Approval Authority, generally and specifically for NC.

6 Who must have an approved pretreatment program?

7 List the initial and on-going documentation required for an approved pretreatment program.

8 How often must the POTW sample SIUs in NC?

9 When is the PAR due?

10 How long does 40 CFR 403.12 indicate pretreatment records are to be maintained?

11 How often are local limits required to be reviewed or revised?

12 Understand what information is considered to be public information.

13 What period of time does the POTW have before issuing or denying a permit?

14 Where does the POTW's legal authority come from to enforce the pretreatment program?

15 Be able to define bypass.

16 What document does the State use to require a specific discharger to have a pretreatment program?

17 What is an Authorization to Construct (ATC) and when is one needed?

CHAPTER TWO – INDUSTRIAL WASTE SURVEY

1 What is an industrial waste survey?

2 Why must we conduct an industrial waste survey?

3 Know and understand the conditions which require a POTW to assign SIU status to an IU.

4 What is the minimum number of sources that must be used to conduct the industrial waste survey?

5 What are the sources that can be used to conduct the industrial waste survey?

6 Know the steps involved in conducting a survey.

7 Why can certain businesses be eliminated from the IWS and what are some examples of these?

8 Know the type of information needed from the industry to conduct a IWS with the short form and with the long form.

9 What IWS information must be available to the State for its review?

10 What should be conducted on an ongoing basis to ensure that you are aware of any new Significant Industrial User?

CHAPTER THREE – INDUSTRIAL PRETREATMENT PROCESSES

1 What are the three types of treatment processes and what do they each remove?

2 Be able to categorize a specific treatment process as one of the three general types of pretreatment.

3 Know which processes are appropriate for pretreatment of specific pollutants described in Table 3.2.

4 Be aware of the types of pollutants that are produced during treatment & considerations needed for proper disposal.

5 Be familiar with how each physical treatment process discussed in the chapter removes pollutants.

6 Why is flow equalization used?

7 How are solids removed from suspension in settling tanks and clarifiers?

8 What are some typical problems encountered with clarifiers?

9 Why do filters need to be cleaned?

10 Understand how reverse osmosis works.

11 What is adsorption?

12 What does pH measure?

13 What are the two pollutants that must be separated from the normal metal waste stream?

14 Know the stages in the treatment of cyanide.

15 What does ion exchange remove from a waste stream?

16 What are some of the methods for volume reduction of sludge generated?

CHAPTER FOUR – INSPECTION PROCEDURES

1 Why are inspections important?

2 What is the minimum frequency for inspecting each kind of SIU?

3 What is a neutral inspection plan and its purpose?

4 Name the 5 categories of inspections, what they entail and when they are conducted?

5 Why should gifts, favors, or lunches not be accepted by an inspector?

6 What are some of the knowledge and skills required for pretreatment inspectors?

7 What should be included in a field notebook?

8 What should not be included in a field notebook?

9 Where does the legal authority to enter a facility come from?

10 What is needed if entry to a facility is denied?

11 Under what two circumstances is a warrant not necessary?

12 Understand how to obtain consent when arriving for an inspection.

13 Know what logs/sheets may be signed by inspectors upon entry to a facility.

14 Know the access requirements to a Federal Facility with security clearances.

15 Know how to proceed when an inspector is denied consent to enter.

16 Know how to proceed when an inspector is denied access to certain areas.

17 Know how to proceed when an inspector is denied permission to use a camera.

18 Know what should be observed during the physical plant review.

19 What are the five objectives of the self-monitoring review?

20 Know how often to evaluate an SIU for the need for a Slug Control Plan.

21 How long must pretreatment records be maintained?

22 Understand the confidentiality process.

CHAPTER FIVE– CATEGORICAL REGULATIONS/STANDARDS

1 What is another name for Federal Categorical Standards?

2 What does it mean that the Federal categorical standards are self-implementing?

3 The first categorical regulations promulgated in the mid 1970's focused on what type of pollutants?

4 Are Federal Categorical Pretreatment Standards different from Effluent Limitation Guidelines?

5 Know what PSNS and PSES are.

6 How do PSNS and PSES numeric limits differ?

7 Understand the difference between the Federal Register and the Code of Federal Regulations.

8 Where can you find the final compliance date in the Federal Register?

9 When looking at a categorical regulation in CFR, where would the promulgation and compliance dates be located?

10 Be familiar with the process of determining if a facility is covered by Categorical regulations.

11 Why does EPA allow alternative pollutant monitoring in some categorical regulations?

12 What is the significance of the definition of new source?

13 Define new source.

14 When does construction commence, according to the new source definition?

15 Define existing source.

16 How does the sale of a company or company name change alter the classification from existing source to new source?

17 Understand how a CIU's status as a new or existing source determines its final compliance date.

18 When must an existing facility submit a baseline monitoring report?

19 When must a new facility submit a baseline monitoring report?

20 When must an existing facility submit a 90-day compliance report for a new categorical regulation?

21 When must a new source submit a 90-day compliance report for a categorical regulation?

22 What are the required contents of BMRs in CFR Part 403.12?

23 How do the contents of BMRs for new and existing sources differ?

24 Be able to explain why a compliance schedule should and should not be developed for a CIU.

25 What are the required contents of 90-day compliance reports?

26 Understand when a facility is in SNC for a new categorical regulation.

27 How does EPA define “monthly average” as it relates to categorical standards?

28 Know the differences between concentration-based standards, mass-based standards and production-based standards.

29 Know how to convert limits in units of concentration to units of mass.

30 Know the situations which do not require a categorical industry to be issued an SIU permit.

31 Understand waiver for pollutants not present, including the type of sampling data a waiver would be based on.

32 What are some reasons that EPA allows pollutant certifications?

33 Define TTO.

34 Where can you find the list of TTOs that apply to each categorical standard?

35 Be able to identify the seven industrial categories that have a TTO limit.

36 What is the TTO certification reporting frequency for metal finishers?

37 Know what plan is required for metal finishers to utilize the TTO certification option.

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38 Define non-significant CIU.

39 What are the differences between a CIU and a middle-tier CIU?

40 Categorical pretreatment standards apply only to what type of flow?

41 Define regulated process wastewater.

42 Define dilute wastestreams.

43 Define unregulated wastestreams.

44 Understand concepts of end-of-process and end-of-pipe; and where published categorical pretreatment standards apply.

45 When will a categorical pretreatment standard be the same as the end-of-pipe standard?

46 What determines if the CWF should be used?

47 What is the purpose of removal credits and what parameters does it apply to?

48 What is a fundamentally different factors variance?

49 When must an industry apply for a variance for a fundamentally different factor?

50 What does net/gross adjustment allow for?

51 When should a net/gross adjustment not be allowed?

52 Understand how much and what type production data should be reviewed to create a production based standard.

53 Be able to recognize the six core processes regulated in 413 and 433

54 Know the factors determining when a facility should be classified as an electroplater (413) & when it should be classified as a metal finisher (433).

55 What defines a job shop electroplater?

CHAPTER SIX – THE PERMITTING PROCESS

1 What gives the POTW the legal authority for issuing IU permits?

2 What are some of the basic policy decisions that the POTW must make prior to permit issuance?

3 What is a permit?

4 Who must be issued a permit?

5 Who should sign the permit application?

6 What is the maximum duration of a permit?

7 When is an inspection conducted at the facility?

8 What are some of the common permitting errors and omissions?

9 What are the restrictions that reduce permit writing flexibility?

10 Which type of limits cannot be increased?

11 What are the 5 main elements of a permit?

12 What are the major components of the cover page?

13 Which pollutants require regulation in a permit?

14 Where are local limits applied?

15 What information is found on the effluent limits page?

16 What is a tiered permit?

17 When should tiered permits be considered?

18 What information is available on an allocation table?

19 How is the sampling location selected?

20 What factors should be considered when establishing monitoring frequencies?

21 When is an SIU not required to sample?

22 When must an SIU notify the POTW that a self-monitoring violation has occurred?

23 What factors should be considered when establishing when reports are due?

24 What are the signature requirements for reports?

25 Be familiar with the standard conditions in a permit.

26 How long are permittees required to retain records?

27 Be familiar with the conditions that may be included in the Special Condition section.

28 Be familiar with the 8 streamlining changes pertaining to permit writing.

29 What is a fact sheet and what is its purpose?

30 How long does a permittee have to comment on or appeal the permit conditions?

31 Know which documents should be submitted to the SIU and State for a permit issuance.

32 How long does the State have to comment on the permit?

33 Understand the requirements for establishing the effective date of a modified permit.

34 What table is checked during permit writing to verify that the POTW has the capacity for additional pollutant loading?

35 When should the cover page be signed and dated on a permit modification?

36 What is the maximum duration of a modified permit?

37 What provides the legal authority for a POTW to implement a hauled waste program?

38 If a hauled hazardous waste is discharged to a POTW, what regulation must the POTW comply with?

39 Who specifies the discharge point for hauled waste?

40 What are some ways to identify waste haulers that might discharge to a POTW?

41 What information might be required on a waste manifest form?

CHAPTER SEVEN – DATA REVIEW, VERIFICATION and INTERPRETATION

1 Why is it necessary to verify laboratory data?

3 Define MAHL.

2 Define LTMP and STMP.

4 What type of sampling data are required to be included on the DMR report?

5 Who must conduct the SIU LTM pollutant sampling and analysis?

6 Where does the uncontrollable load come from?

7 What is a laboratory bench sheet and why is it important?

8 Where would you find approved wastewater methods for the laboratory?

9 Where can you find the NC wastewater laboratory certification rules?

10 Understand that NC requires labs to be certified for each parameter they report for NPDES or Pretreatment Programs.

11 Know the Analytical Quality Control Program elements required in the NC wastewater laboratory certification rules.

12 What information should be included on a COC and when is a COC used?

13 Where is the proper location for sampling?

14 Determine the four ways to collect a composite sample.

15 What parameters must be collected as a grab sample?

16 When does the holding time start with a sample?

17 When is a sample considered a sample?

18 How do you choose an appropriate lower detection level for a permitted pollutant?

19 Define accuracy and know how to calculate %Recovery.

20 Be familiar with how a standard curve is used to analyze samples for a target pollutant.

21 What is the purpose of a second source standard?

22 How often should mid-range standards be run and what is its purpose?

23 How often does NC Lab Certification Group require duplicate analysis?

24 What is the purpose of analyzing duplicates?

25 What is laboratory precision measured in and know how to calculate it?

26 Be able to calculate RPD.

27 What is the purpose of analyzing blanks?

28 Understand the signs of trouble in the laboratory.

29 Understand types of interferences.

30 Be able to convert different units: mg/L, ug/L, ng/L, %, ppt, ppb, ppm

31 Per 40 CFR 503, results of analysis of biosolids are expressed in what units?

32 What is the pounds formula?

33 Define BOD, COD, and CBOD; and know the differences and relationships between them.

34 Understand the quality control requirements for BOD/CBOD.

35 What are the quality control requirements for COD?

36 What procedure is required to ensure that TSS residue reaches a constant weight?

37 Define Total Nitrogen, TKN, Nitrate/Nitrite and Ammonia Nitrogen; and know the differences and relationships between them.

38 What are the different forms of phosphorus?

39 Know the main difference between dissolved metals and total metals analyses.

40 Know the difference between a 624 verses 625.

41 What are the reasons that phthalates or methylene chloride is detected in organic samples?

42 When interpreting data what is the first question that should be asked?

43 Define data exclusion.

CHAPTER EIGHT – COMPLIANCE JUDGMENT

1 Define SNC

2 What are the reporting periods in North Carolina?

3 Name some of the documents that should be tracked under the pretreatment program.

4 When are reports considered to be submitted?

5 Know the ways reporting can lead to SNC.

6 Know what CJPs are and how to calculate them.

7 How do you judge compliance for split samples?

8 How do you judge compliance for two separate samples?

9 What are the ways you can judge compliance with BDL?

10 What are the ways you can average BDL data?

11 Know how to judge compliance with an average limit.

12 Define Chronic Violations and TRC Violations.

13 Know how to calculate SNC.

14 Know how to sample out of SNC.

CHAPTER NINE - REFERENCE MATERIAL