

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 must have an approved pretreatment program?
- 5 Define Control Authority & Approval Authority, generally and specifically for NC.
- 6 Who has the final word concerning discharge limits, program management and any part of the pretreatment program?
- 7 Understand what initial and on-going documentation is required for an approved pretreatment program
- 8 Who is a signatory official?
- 9 What period of time does the SIU have to resample and report to the POTW after a self-monitoring violation?
- 10 How often must the POTW sample SIUs in NC?

- 11 When is the PAR due?
- 12 How long does 40 CFR 403.12 indicate pretreatment records are to be maintained?
- 13 How often are local limits required to be reviewed or revised?
- 14 Understand what information is considered to be public information.
- 15 What period of time does the POTW have before issuing or denying a permit?
- 16 Where does the POTW's legal authority come from to enforce the pretreatment program?
- 17 Be able to define bypass.
- 18 What document does the State use to require a specific pretreatment program?
- 19 How often is an IWS summary required?
- 20 What is an A to C 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 purpose of an IWS?
- 5 Know the steps involved in conducting a survey.
- 6 What are the sources that can be used to conduct the industrial waste survey?
- 7 What one source must be used to conduct the industrial waste survey?
- 8 How often must an industrial survey be conducted?
- 9 What businesses can be eliminated from the IWS due to no significant pollutants?
- 10 What information is needed from the industry to conduct a survey?

- 11 What IWS information must be sent to the State?
- 12 What should be conducted on an ongoing basis to ensure that you are aware of any new Significant Industrial Users?

CHAPTER THREE – INDUSTRIAL PRETREATMENT PROCESSES

- 1 What are the three types of treatment processes and what do they remove?
- 2 Be able to categorize a specific process as one of the three general types of pretreatment.
- 3 Know which processes are appropriate for pretreatment of different, specific types of waste discussed in module.
- 4 Be familiar with how each process removes pollutants.
- 5 Be aware of the considerations that must be made in disposal of by-products.
- 6 Why is flow equalization used?
- 7 Settling tanks or clarifiers are rated on what?

- 8 What are some typical problems encountered with clarifiers?
- 9 How are filters cleaned?
- 10 What are the limitations to reverse osmosis?
- 11 What is adsorption?
- 12 What does pH measure?
- 13 What are the two pollutants that must be separated from the normal metal wastestream?
- 14 How does RCRA affect sludge handling?
- 15 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?
- 4 Name the 5 categories of inspections 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 Know what logs/sheets may be signed by inspectors upon entry to a facility.

- 13 Know the access requirements to a Federal Facility with security clearances.
- 14 Understand how to obtain consent when arriving for an inspection.
- 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 the physical plant review requirements.
- 19 Know how often to evaluate an SIU for the need for a Slug Control Plan.
- 20 What are the five objectives of the self-monitoring review?
- 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 Define PSNS and PSES.
- 6 How do PSNS and PSES numeric limits differ?
- 7 The date the final rule is published in the Federal Register is known as what?
- 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?
- 10 What is 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 Define new source
- 13 Define existing source
- 14 When does construction commence according to the new source definition?
- 15 What is the significance of the definition of new source?
- 16 How does the sale of a company or company name change alter the classification from existing source to new source?
- 17 What determines the compliance date for a CIU?
- 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 When should a compliance schedule be issued for a categorical facility?
- 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 difference between concentration-based standards, mass based standards and production based standards.
- 29 When is an IU or SIU not considered to be a CIU, even when its process wastewater is covered by categorical standards?
- 30 Understand waiver for pollutants not present, including the type of data a waiver would be based on.
- 31 Why are pollutant certifications sometimes allowed by EPA?
- 32 Be able to discuss the different certifications and alternative monitoring requirements.

33 Define TTO.

34 Where can you find the list of TTO's 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?

37 What may be substituted for concentration based standards under the Transportation Equipment Cleaning (

38 Define non-significant CIU

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

40 What is the relationship of local limits to categorical standards?

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

42 Define regulated process wastewater.

43 Define unregulated wastestreams.

- 44 Define dilute wastestreams.
- 45 Where are categorical pretreatment regulations applied?
- 46 When is a categorical pretreatment standard the same as the end-of-pipe standard?
- 47 Define CWF.
- 48 What determines if the CWF should be used?
- 49 What is the purpose of removal credits and what parameters does it apply to?
- 50 What is fundamentally different factors variance?
- 51 When must an industry apply for a variance for a fundamentally different factor?
- 52 What does net/gross adjustment allow for?
- 53 When should a net/gross adjustment not be allowed?
- 54 Be able to recognize the six core processes regulated in 413 and 433

- 55 What defines a job shop electroplater?
- 56 Know the factors determining when a facility should be classified as an electroplater (413) & when it should be classified as a metal finisher (433).
- 57 Understand how production based categorical pretreatment standards are converted to equivalent mass or concentration limits.
- 58 Understand how to review production data to create a production based standard.

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 Who must be issued a permit?
- 4 What is a Significant Industrial User 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 What information is found on the effluent limits page?
- 14 Which pollutants require regulation in a permit?
- 15 Where are local limits applied?
- 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 What are some conditions that may be included in the Special Condition section?

- 28 Be familiar with each of the streamlining changes pertaining to permit writing.
- 29 What is a fact sheet and what is its purpose?
- 30 Know which documents should be submitted to the SIU and State for a permit issuance.
- 31 How long does a permittee have to comment on or appeal the permit conditions?
- 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 to verify that pollutant loadings are available?
- 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 into 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 compliance?
- 2 Define LTMP and STMP.
- 3 Define MAHL.
- 4 What is 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 methods for the laboratory?
- 9 Where can you find the NC wastewater laboratory certification rules?
- 10 What information should be included on a COC?
- 11 Where is the proper location for sampling?
- 12 Determine the four ways to collect a composite sample.
- 13 What parameters must be collected as a grab sample?
- 14 Understand the way to collect VOA's.
- 15 What container should be used for collection of metals and why?
- 16 Understand the correct procedure to collect a cyanide sample.
- 17 When is a sample considered a sample?

- 18 When does the holding time start with a sample?
- 19 When should you use a lower detection level?
- 20 Define accuracy and know how to calculate %R.
- 21 Be able to calculate RPD.
- 22 Know how standard curves are used.
- 23 What is the minimum requirement of standards for a curve for a metal sample?
- 24 What should the curve correlation coefficient be?
- 25 What is the purpose of a second source standard?
- 26 How often should mid-range standards be run and what is its purpose?
- 27 What range should the percent recovery for the lower reporting level be?
- 28 How often does NC Lab Certification Group require duplicate analysis?

- 29 What is laboratory precision measured in and know how to calculate it?
- 30 What is the purpose of analyzing blanks?
- 31 Define the following types of **blanks**: reagent, method, digested, container, field, equipment, preservative a
- 32 Understand the signs of trouble in the laboratory.
- 33 Understand types of interferences.
- 34 Be able to convert different units: mg/L, ug/L, ng/L, %, ppt, ppb, ppm
- 35 What is the pounds formula?
- 36 Define BOD, COD, and CBOD and know the difference between them.
- 37 Understand the quality control requirements for BOD/CBOD.
- 38 What are the quality control requirements for COD?
- 39 What procedure is required for TSS analysis?

- 40 How do you run a pH analysis?
- 41 What are the forms of nitrogen?
- 42 Define Total Nitrogen, TKN, Nitrate/Nitrite and Ammonia Nitrogen.
- 43 What are other points to remember about TKN?
- 44 What are the different forms of phosphorus?
- 45 What are the methods to run metals?
- 46 Know the difference between a 624 verses 625.
- 47 What are the reasons that phthalates or methylene chloride is detected in organic samples?
- 48 Per 40 CFR 503, results of analysis of biosolids are expressed in what units?
- 49 When interpreting data what is the first question that should be asked?
- 50 Define data exclusion.

CHAPTER EIGHT – COMPLIANCE JUDGMENT

- 1 Define SNC
- 2 What is the compliance or reporting period in NC?
- 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 CJP's 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