

**PRETREATMENT CERTIFICATION
GRADE II
NEEDS-TO-KNOW**

CHAPTER ONE – RULES AND REGULATIONS

Where can you find federal pretreatment regulations?
Where can you find North Carolina pretreatment regulations?
Who must have an approved pretreatment program?
What are the objectives of the pretreatment program?
How many copies of the Annual Pretreatment Report must be submitted to the State?
How often must the POTW sample SIU's in NC?
Define BMR?
How long must pretreatment records be maintained?
Understand what is considered to be public access.
Prior to permit issuance when must an inspection be conducted?
Define Control Authority & Approval Authority.
What period of time does the Control Authority have before issuing or denying a permit?
What period of time does the Approval Authority have to comment on a permit?
Who has the final word concerning discharge limits, program management and any part of the pretreatment program?
Be able to define bypass.
How often are local limits required to be reviewed or revised?
Be able to convert mg/l to ug/l
Mass based limits are expressed as what?
What period of time does the SIU have to resample and report to the CA after a self-monitoring violation?
Who is a signatory official?
How does the State enforce the pretreatment program?
Where does the legal authority come from to enforce the pretreatment program?
How often is an IWS required?
What is an A to C and when is one needed?
When is the PAR due?

CHAPTER TWO – INDUSTRIAL USER SURVEY

What is an industrial user survey?
How do you establish a survey?
What information is needed to conduct a survey?
How often must an industrial survey be conducted?
What business can be eliminated from the IWS due to no significant pollutants?
What source must be included on the master list?
Why must we conduct an industrial waste survey?
What are the sources that can be used to conduct the industrial waste survey?

What one source must be used to conduct the industrial waste survey?
What should be conducted on an ongoing basis to ensure that you are aware of any new Significant Industrial User?

CHAPTER THREE – INSPECTION PROCEDURES

Why are inspections important?
What is the minimum frequency for inspecting SIU's?
What is a neutral inspection plan?
Name the 5 categories of inspections and when they are conducted?
Why should gifts, favors, or lunches not be accepted by an inspector?
What are some of the knowledge and skills required for pretreatment inspectors?
What should be included in a field notebook?
What should not be included in a field notebook?
Where does the legal authority to enter a facility come from?
What is needed if entry to a facility is denied?
Under what two circumstances is a warrant not necessary?
Know what logs/sheets may be signed by inspectors upon entry to a facility.
Know the access requirements to a Federal Facility with security clearances.
Know how to proceed when an inspector is denied consent to enter.
Know how to proceed when an inspector is denied access to certain areas.
Know how to proceed when an inspector is denied permission to use a camera.
Know the physical plant review requirements.
What are the two objectives of the self-monitoring review?
How long must pretreatment records be maintained?
Understand the confidentiality process.

CHAPTER FOUR – INDUSTRIAL PRETREATMENT PROCESSES

What are the three types of treatment processes and what do they remove?
Why is flow equalization used?
What does screening remove?
Settling tanks or clarifiers are rated on what?
What are some typical problems encountered with clarifiers?
How are filters cleaned?
What does reverse osmosis remove?
What are the limitations to reverse osmosis?
What is adsorption?
What does pH measure?
What are the two ways most metals can be removed from wastewater?
What are the two pollutants that must be separated from the normal metal stream?
Complex metals should be removed via what method?
Understand the basic concepts of treating for hexavalent chromium and cyanide.
What does ion exchange remove?

When would biological treatment be used?
What are some of the methods for volume reduction?
How does RCRA affect sludge handling.
What is the emulsion cracking process used to remove?
Understand the basic concepts for DAF and Membrane Filtration.

CHAPTER FIVE– CATEGORICAL REGULATIONS/STANDARDS

The concern with industrial facilities in the mid-1970's was what?
Define existing source
Define new source
How does the sale of a company or company name change alter the classification from existing to new source?
When does construction commence?
What is the significance of the definition of new source?
What is the difference between new sources and existing sources as related to limits?
What determines the compliance date for a CIU?
When are PSES required to achieve compliance with limitations?
When are PSNS required to achieve compliance with limitations?
Name some differences between categorical regulations.
When is an SIU not considered to be a CIU when it is covered by a regulation?
Why are 40 CFR Part 405 (Dairy Products Processing) and Part 410 (Textile Mills) not CIU's?
Know the difference between concentration-based standards and production based standards.
Categorical pretreatment standards apply only to what type of flow?
Define regulated process flow.
Define unregulated wastestreams.
Define dilute wastestreams.
When are certifications allowed by EPA?
Know types of long term averages.
Be able to discuss the different certifications and alternative monitoring requirements.
What may be substituted for regulated parameters under the Transportation Equipment Cleaning?
Why does EPA allow alternative monitoring?
Besides commingling of wastestreams, what other standards can be provided to adjust the categorical pretreatment standard?
What is the purpose of removal credits and what parameters does it apply to?
What is fundamentally different factors variance?
When must an industry apply for a variance for a fundamentally different factor?
What does net/gross adjustment allow for?
When should a net/gross adjustment not be allowed?
Equivalent limits should be based on what and what period of time?
When can projected production rates be used?
When should tiered permits be considered?

When is a categorical pretreatment standard the same as the end-of-pipe standard?
Define CWF and FWA.
What determines if the CWF should be used?
Define TTO.
Where can you find the list of TTO's that apply to each categorical standard?
How many industrial categories have TTO limits?
Be able to name industrial categories that have a TTO limit.
What are the two ways to adjust categorical pretreatment standards?
Be able to calculate a CWF and FWA.
Be able to recognize the six core processes in electroplating.
What defines a job shop electroplater?
Know the difference between when a facility is an electroplater and when it is a metal finisher.

CHAPTER SIX – THE PERMITTING PROCESS

What are the two items that are often not complete on an application?
Who should sign the permit application?
When is an inspection conducted at the facility?
What are some of the basic policy decisions that the POTW must make prior to permit issuance?
What is a Significant Industrial User Permit?
Who needs a permit?
What are some of the common permitting errors and omissions?
Which pollutants require permit regulation?
What is the process of determining if a facility is under Categorical regulations?
What is the relationship of local limits to categorical standards?
Where are categorical pretreatment regulations applied?
Where are local limits applied?
What are the specific requirements for monitoring & reporting in a permit?
How do you select the sampling location?
When is an SIU not required to sample?
When must an SIU notify the POTW when a self-monitoring violation has occurred?
What factors should be considered when establishing when reports are due?
What are the signature requirements for reports?
Be able to identify some of the standard conditions in a permit.
What are some conditions that may be included in the Special Condition section?
Why is a fact sheet needed?
What is the first step in modifying a permit?
What table is checked to verify that pollutant loadings are available?
What is the maximum duration of a permit?
How long does a permittee have to request an adjudicatory hearing?
When is a permit limit not required to be placed in a permit?
When should the cover page be signed and dated on a permit modification?
The date the final rule is published in the Federal Register is known as what?

Where can you find the compliance date in the regulations?
Define PSNS and PSES.
Who is required to submit a BMR and when must they submit the report?
When must an existing facility submit a report on compliance with a new categorical regulation?
When must a new source submit a report on compliance?
When should a SOC be issued for a new categorical facility?
When is a 90-Day Compliance Report required for existing sources?
When is a 90-Day Compliance Report required for new sources?
Understand when a facility is in SNC for a new categorical regulation.

CHAPTER SEVEN – DATA REVIEW, VERIFICATION and INTERPRETATION

Why is it necessary to verify compliance?
Define LTMP and STMP.
Define MAHL.
What is required to be included on the DMR report?
Who must conduct the SIU LTM pollutant sampling and analysis?
Where does the uncontrollable load come from?
What is a laboratory bench sheet and why is it important?
Where would you find approved methods for the laboratory?
Which Edition of Standard Methods is approved by EPA?
Where can you find the NC wastewater laboratory certification rules?
What information should be included on a COC?
Where is the proper location for sampling?
Determine the four ways to collect a composite sample.
What parameters must be collected as a grab sample?
Understand the way to collect VOA's.
What container should be used for collection of metals and why?
Understand the correct procedure to collect a cyanide sample.
When does the holding time start with a sample?
When should you use a lower detection level?
Define accuracy and know how to calculate %R.
Be able to calculate RPD.
Know how standard curves are used.
What is the minimum requirement of standards for a curve for a metal sample?
What should the curve correlation coefficient be?
What is the purpose of a second source standard?
How often should mid-range standards be run and what is its purpose?
What range should the percent recovery for the lower reporting level be?
How often does NC Lab Certification Group require duplicate analysis?
What is laboratory precision measured in and know how to calculate it?
What is the purpose of analyzing blanks?
Which parameter may the blank correction be subtracted from the sample?

Define: reagent blank, method blank, digested blank, container blank, field blank, equipment blank, preservative blank and trip blank.

Understand the signs of trouble in the laboratory.

Understand types of interferences.

Be able to convert different units.

What is the pounds formula?

Define BOD, COD, and CBOD and know the difference between them.

Understand the quality control requirements for BOD/CBOD.

What are the quality control requirements for COD?

What procedure is required for TSS analysis?

How do you run a pH analysis?

What are the forms of nitrogen?

Define Total Nitrogen, TKN, Nitrate/Nitrite and Ammonia Nitrogen.

What are other points to remember about TKN?

What are the different forms of phosphorus?

What are the methods to run metals?

Know the difference between a 624 versus 625.

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

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

Define data exclusion.

CHAPTER EIGHT – COMPLIANCE JUDGMENT

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

Know how to judge compliance with an average limit.

Know how to calculate CJP.

Define Chronic Violations and TRC Violations.

Know how to calculate SNC.

Know how to sample out of SNC.

How do you judge compliance for split samples?

How do you judge compliance for two separate samples?

What are the ways you can judge compliance with BDL?

What are the ways you can average BDL data?

Know the ways reporting can lead to SNC.

When are reports considered to be submitted?

CHAPTER NINE - REFERENCE MATERIAL

No chapter Nine - References