

Memorandum

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Division of Water Program Coordination 9th Floor 629 East Main Street, Richmond, VA

SUBJECT: Guidance Memo No.01-2013
 Checklists for Wastewater Laboratory Inspections

TO: Regional Directors

FROM: Larry Lawson, P.E.



DATE: May 3, 2001

COPIES: Regional Permit Managers, Regional Compliance and Enforcement Managers,
 Regional Water Compliance Managers, Martin Ferguson, Richard Ayers,
 Bill Purcell, Betsy Ziomek

SUMMARY: The laboratory inspection checklists for a given parameter or method used for VPDES or VPA monitoring have been revised and may now be included in the final DEQ - Water Division Laboratory Inspection Report. The checklists are located on k:/agency/labshts/lab inspection/Revisions. Questions or comments regarding this topic can be directed to Betsy Ziomek at (804) 698-4181.

Laboratory inspection checklists outline appropriate sample collection and preservation; equipment; sample preparation; analyses; and data keeping for performing compliance analyses for VPDES and VPA permits. All of the existing checklists which deal with a given parameter or method have been revised in preparation for the upcoming "Deficiency/No Deficiency" laboratory inspection rating scheme. The revision includes a citation with each question to indicate the basis for it. The citations are given for Standard Methods For the Examination of Water and Wastewater, 18th edition 1992, Methods for Chemical Analysis of Water and Wastes, 40 CFR, or Permit.

"Permit" as a citation may refer to either requirements of the VPDES and VPA permits or what is generally termed good laboratory practices (GLP). GLP is the common and ordinary practices or techniques routinely used in a laboratory. Some examples of GLP are use of appropriate sized glassware, inclusion of units of measure in documentation, proper rinsing techniques, etc. The permit has a signatory requirement that states "...the information submitted is, to the best of my knowledge and belief, true, accurate, and complete." GLP must be followed in order for the data to be "true, accurate, and complete"; therefore, good laboratory practices are a requirement of the permit.

The following checklists have been revised and may be found on K:\agency\LABSHTS\lab inspection\Revisions\:

1664 rev 03-01 - Oil and Grease [Previously in Draft form]
624 rev 10-00 - Purgeables (GC/MS) [Previously in Draft form]
625 rev 02-01 - Base/Neutrals and Acids (GC/MS) [Previously in Draft form]
Balance rev 03-01 - Analytical Balance
bod rev 03-01 - Biochemical Oxygen Demand
do-electrode rev 03-01 - Dissolved Oxygen using electrode
do-winkler rev 03-01 - Dissolved Oxygen using Winkler method
fecal-A1 rev 03-01 - Fecal Coliform using A-1 media
fecal-mf rev 03-01 - Fecal Coliform using Membrane Filter
fecal-mpn rev 03-01 - Fecal Coliform using Multiple-Tube Fermentation Technique
holding times rev 10-00 - Sample Analysis Holding Time/Container/Preservation
mercury rev 03-01 - Mercury using Cold Vapor
metals rev 03-01 - Metals using Graphite Furnace, Flame, or ICP
metals 200.8 rev 04-01 - Metals using ICP-MS [Previously in Draft form]
NH3 Titrimetric rev 03-01 - Ammonia Nitrogen using Titrimetric Methods
nh3 dist rev 03-01 - Ammonia Nitrogen Distillation
NH3 ISE rev 03-01 - Ammonia Nitrogen using Ion Specific Electrode
NH3 Nessler rev 03-01 - Ammonia Nitrogen using Spectrophotometric - Nesslerization
NO2 HACH rev 03-01 - Nitrite using HACH NitriVer 3 [Combination of previous
checklists entitled NO2-Colorimeter and NO2-Hach Spectrophotometer]
NO2 Spec rev 03-01 - Nitrite Nitrogen using Spectrophotometer
NO2-NO3 rev 03-01 - Nitrate-Nitrite Nitrogen using Cadmium Reduction
NO3 Brucine rev 03-01 - Nitrate Nitrogen using Brucine Method
O&G rev 03-01 - Oil and Grease using Freon
o-phos 2 Reagent rev 04-01 - Orthophosphate using EPA Method 365.3
o-phos rev 04-01 - Orthophosphate using Ascorbic Acid
pH ELEC rev 04-01 - pH using Electrometric Method
pH 17 N - rev 04-01 - pH using HACH 17-N pH Test Kit
Phos digest rev 04-01 - Phosphate Persulfate Digestion
Temp rev 04-01 - Temperature
Templog rev 04-01 - Equipment Temperature Log/Thermometer Calibration
Checksheet
TKN dig-dist rev 04-01 - Total Kjeldahl Nitrogen Digestion followed by Distillation
[Combination of previous checklists entitled TKN-Digestion and TKN
Semimicro]
TKN direct rev 04-01 - Total Kjeldahl Nitrogen using Direct Potentiometric Method
(EPA Method 351.4)
TRC amp rev 04-01 - Total Residual Chlorine Direct Amperometric Titration
TRC CN-66 rev 04-01 - Total Residual Chlorine using HACH CN-66 Test Kit
TRC dpd-c rev 04-01 - Total Residual Chlorine using DPD Colorimeter
TRC dpd-fas rev 04-01 - Total Residual Chlorine using DPD/FAS Titrimetric Method

TRC dr-100 rev 04-01 - Total Residual Chlorine using HACH DR-100
TRC elect rev 04-01 - Total Residual Chlorine using Chlorine Electrode
TRC iodat rev 04-01 - Total Residual Chlorine using Iodate Titrant
TRC Iodine Titrant rev 04-01 - Total Residual Chlorine using Titrimetric, Iodometric, or
amperometric Back Titration with Iodine Titrant
TRC Iodo Direct rev 04-01 - Total Residual Chlorine using Iodometric Direct
TRC Pocket rev 04-01 - Total Residual Chlorine using a HACH Pocket Colorimeter
[Previously in Draft form]
TSS rev 04-01 - Total Suspended Solids
Water rev 04-01 - Laboratory Grade Water Check for Bacteriological Testing

DISCLAIMER

This document provides technical and procedural guidance to the inspection staff to evaluate laboratories producing data related to permit compliance. This document is guidance only. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decision in any particular case will be made by applying the State Water Control Law and the implementation regulations on the basis of site specific facts.