Safe Drinking Water Act (SDWA) Chemical, Radionuclide, & DBP Compliance Sampling

Pocket Guide

(For EPA Region 6 Tribal Drinking Water Systems)

SOUTHWEST ENVIRONMENTAL FINANCE CENTER

February 2021 Update

Accurate Environmental Laboratories

Pocket Guide Contents

Introduction

Compliance sampling as required by the Safe Drinking Water Act (SDWA) plays an important role in protecting public health.

This guide is to be used by EPA Region 6 Tribal Public Drinking Water Systems (PWS) who use Accurate Environmental Laboratories in Stillwater, Tulsa, and Oklahoma City, OK for SDWA chemical and radionuclide compliance sample analysis.

This Pocket Guide along with the compliance Sampling Schedule provided each year by EPA Region 6 should be used together to ensure that compliance samples are taken in a timely manner per established schedules. Ensuring that this is done is the responsibility of each water system.

For questions regarding SDWA Compliance contact the EPA Region 6 Tribal Drinking Water Program Coordinator – Alison Fontenot – at (214) 665-7482 or fontenot.alison@epa.gov.

For questions regarding sampling schedules and laboratories contact Matt Ziegler at (505) 681-7435 (mattz@unm.edu) or Rose Afandi at (505) 620-5191 (rafandi@unm.edu) at the Southwest Environmental Finance Center (SW EFC).

Information in this Pocket Guide is subject to change at any time. The latest version of this Pocket Guide and along with the latest laboratory chain of custodies are available under the Resources section of our webpage located at:

swefc.unm.edu/home/resources/

Scheduling Compliance Sampling

Each PWS has a designated Regulatory Compliance Officer (RCO). The RCO is the person at the water system who is responsible for understanding the compliance schedule for each water system, scheduling sample collection, and ensuring that compliance samples are taken as required. The RCO can either be responsible for collecting the samples or delegating the collection responsibility to someone else.

Compliance sampling needs to be scheduled per the annual Sampling Schedule provided by EPA Region 6. Close attention needs to be given to any seasonal or quarterly collection schedules. For example, disinfection byproduct sampling for chlorinated systems should only be scheduled during the month/s specified in the systems Stage 2 DBPR Sampling Plan. If sampling occurs outside of this sampling window the sample results cannot be used for compliance purposes.

Sampling should only occur when the water system is operating under normal conditions. If compliance samples are scheduled for collection and the system is not operating normally, then sampling should be postponed until normal operating conditions are restored. If normal operating conditions are not achieved before the end of the sampling window, then the samples must be taken to avoid a monitoring violation.

Sampling should always be scheduled earlier in the monitoring period rather than later to ensure that there is plenty of time left in the period in case a problem arises and compliance sample collection must be rescheduled.

Ordering Bottles

It is the responsibility of each water system to order and obtain sampling materials from the lab.

Prior to ordering bottles, determine what is required by using the EPA Region 6 Annual SDWA Sample Schedule for each water system. You can use Table 1 on the next page to help keep track of what you need to order.

Plan and try to pick up sample bottles if you are already coming into Stillwater, Tulsa or OKC for something else. If the water system is on a quarterly schedule for any contaminants, it is always a good idea to have extra sample containers on hand.

Bottles can be ordered by phoning Accurate Labs in:

Stillwater **(405) 372-5300**
Tulsa **(918) 663-5400**
Oklahoma City **(405) 751-3132**

****When ordering bottles, be sure to tell the person at Accurate Labs that the bottles are for an **EPA Region 6 Tribal Drinking Water System******

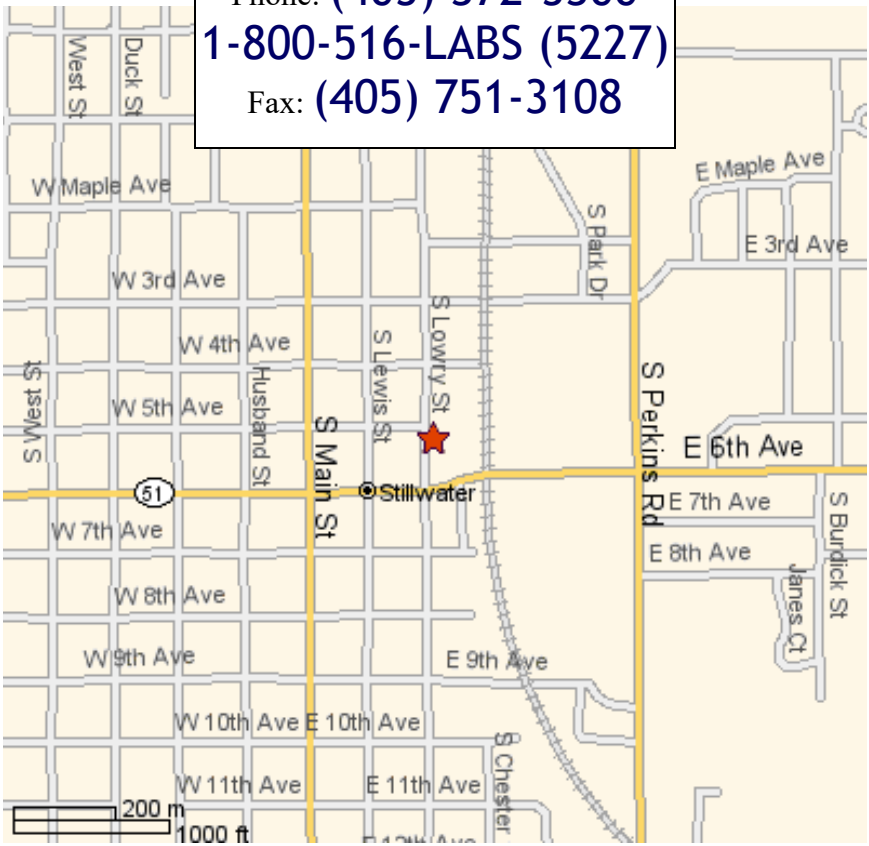
Table 1 – Sample Bottles to Order From Accurate Labs

Chemical/s Sampling For:	Number Required:
Nitrate+Nitrite	
Fluoride, Cyanide, and Drinking Water Metals, (IOCs)	
Total Arsenic	
Volatile Organic Contaminants (VOCs)	
Synthetic Organic Contaminants (SOCs)	
Radionuclides (combined uranium gross alpha, gross beta, combined radium$^{226/228}$)	
Combined Uranium	
Disinfection Byproducts (TTHMs and HAA5s)	

Picking up Bottles – Accurate Labs Locations

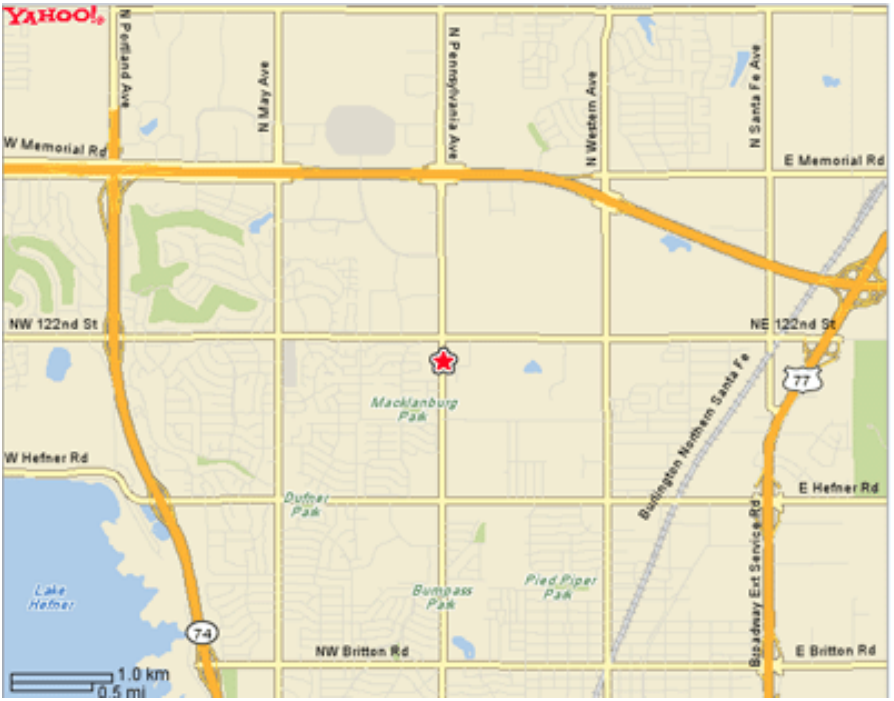
When picking up bottles and before leaving the lab, please go over your order to ensure that you have all the bottles you ordered and any preservatives you need.

Accurate Labs - Stillwater
505 South Lowry
Stillwater, Ok 74074
Phone: (405) 372-5300
1-800-516-LABS (5227)
Fax: (405) 751-3108



Accurate Labs - Tulsa
3910 E. 51st Street
Tulsa, OK 74135
Phone: (918) 663-5400
Fax: (918) 663-6300

Accurate Labs - OKC
12036 North Pennsylvania
Oklahoma City, Ok 73120
Phone: (405) 751-3132
Fax: (405) 751-3108



Preparing to Collect Samples

Prior to collecting compliance samples, the following materials need to be assembled:

- ☐ Annual SDWA Sample Schedule for each water system
- ☐ Sampling Plan if sampling for Stage 2 DBPs
- ☐ Sample Bottles
- ☐ Pen & Marker
- ☐ Chain of Custody Form/s
- ☐ Chlorine Test Kit
- ☐ Cooler with bagged ice or blue ice

Once everything is assembled, use Table 2 and Table 3 to help identify which bottles are used for each of the chemicals being sampled. If needed, use a marker and write on each bottle what chemical or chemical group it is for.

Table 2 – Accurate Labs Chemical/Radionuclide Sample Bottles, Preservatives & Hold Times

Chemical	Bottle	Preservative	Hold Time
Nitrate	500 ml plastic	< 6° C	48 hours
Nitrite	500 ml plastic	< 6° C	48 hours
Nitrate+Nitrite	500 ml plastic	< 6° C & H_2SO_4	28 days
IOCs – Fluoride	500 ml plastic	< 6° C	28 days
IOCs – Total Cyanide	500 ml brown plastic	< 6° C, post NaOH	14 days
IOCs – Drinking Water Metals	500 ml plastic	< 6° C & HNO_3	6 months (mercury 28-days)
Radionuclides (Uranium, Gross Alpha/Beta, Combined Radium$^{226/228}$)	4 L plastic cubitainer	None	6 months
VOCs	3-amber 40 ml VOA Vials NO HEADSPACE	< 6° C Ascorbic Acid, Maleic Acid	14 days
SOCs	Various – see Table 3	< 6° C & various – see Table 3	14 days
DBP – TTHM	2-amber 40 ml VOA NO HEADSPACE	< 6° C & $Na_2S_2O_3$, <6°C	14 days
DBP – HAA5	2-amber 60 ml VOA NO HEADSPACE	< 6° C & Ammonium Chloride	14 days

Table 3 – Accurate Labs Full SOC Kit Contents

Chemical/s	Container	Preservative
EDB/DBCP (EPA 504.1)	2-amber 40 ml VOA	$Na_2S_2O_3$, <6°C
PCBs (EPA 508)	4-amber 1 L	$Na_2S_2O_3$, <6°C
Herbicides (EPA 515.4)	4-amber 60 ml VOA	Na_2SO_3, <6°C
SemiVolatiles (EPA 525.2)	4-amber 1L	Na_2SO_3/post HCl, <6°C
Pest/Carbamates (EPA 531.1)	4-amber 40 ml VOA	$Na_2S_2O_3$/MCAA, <6°C
Glyphosate (EPA 547)	2-amber 40 ml VOA	$Na_2S_2O_3$, <6°C
Endothall (EPA 548.4)	4-clear 8 oz or 4 oz jars	$Na_2S_2O_3$, <6°C
Diquat (EPA 549.2)	4-clear 8 oz jars	$Na_2S_2O_3$, <6°C

Collecting Samples

- Identify the sampling location using the water systems Annual SDWA Sample Schedule, Entry Point (EP) Tags, and/or Sampling Plans.

- Remove any aerators.
- Do not rinse out the bottles.
- Hold the bottles at a 45° angle when you fill them.
- Do not splash when filling the bottles.

A Word on Collecting Organic Samples

- Gas, oil-based fluids, smoking, hairspray, mousse, cologne, perfume, breath spray, mouth wash, and other similar materials can contaminate organics samples.
- Make sure all vehicle or other engines are off when collecting samples as exhaust can also contaminate organics samples.
- Wash hands thoroughly or wear gloves when taking samples.
- Trip Blanks – VOC sample bottle kits from Accurate Labs will include a trip blank. Do not open the trip blank. It should be left untouched in the cooler and transported back to the lab with the collected sample/s.

Collecting Nitrate+Nitrite

Bottle Requirements
One 500-mL plastic bottle preserved with H_2SO_4 (sulfuric acid)

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

Take caution with the preservative – sulfuric acid is a concentrated acid.

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Fill the 500-mL plastic bottle (with H_2SO_4) for Nitrate+Nitrite to the shoulder. Cap and invert the bottle to mix the sample.
5. Label the sample bottle and fill out the COC.
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting Fluoride (IOC)

Bottle Requirements
One 500-mL plastic bottle (unpreserved)

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Fill the 500-mL plastic bottle (unpreserved) for Fluoride to the shoulder and cap the sample.
5. Label the sample bottle and fill out the COC
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting Drinking Water Metals (IOC)

Bottle Requirements
One 500-mL plastic bottle preserved with HNO_3 (nitric acid)

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

Take caution with the preservative – nitric acid is a concentrated acid.

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Fill the 500-mL plastic bottle for Drinking Water Metals to the shoulder. Cap and invert the bottle to mix the sample.
5. Label the sample bottle and fill out the COC.
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting Total Cyanide (IOC)

Bottle Requirements
One 500-mL brown plastic bottle with a vial of NaOH (sodium hydroxide) taped on the outside.

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

Take caution with the preservative – sodium hydroxide is caustic.

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Fill the 500-mL brown plastic bottle for Cyanide halfway, add the vial of NaOH, continue to fill the bottle to the shoulder. Cap and invert the bottle to mix the sample.
5. Label the sample bottle and fill out the COC.
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting Radionuclides

Bottle Requirements
One 4-Liter plastic cubitainer

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Blow up the 4-liter cubitainer with your mouth and fill it to the shoulder and cap the sample.
5. Label the sample bottle and fill out the COC.
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting VOCs

Bottle Requirements
Three 40-mL VOA vials with ascorbic acid and maleic acid

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

Activities including pumping gas, working with oil or hydraulic fluid, and smoking prior to sampling VOCs can result in a contaminated sample.

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.

4. Fill the vials until a reverse meniscus forms at the top (see photo). Cap, invert the bottles, and tap to ensure that there are no air bubbles present. If air is observed, uncap the vial and add a little sample until there is no air present in the sample.

5. The lab will not accept the samples if air is present.
6. Label the sample bottles and fill out the COC.
7. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Collecting SOCs

Bottle Requirements
Various – See Table 3 "Accurate Labs Full SOC Kit Contents"

Sampling Location
The Entry Point to the Distribution System (EP)

Sampling Instructions

Take caution with the preservative – hydrochloric acid is a concentrated acid.

1. If not already running, turn on the well and treatment system that is scheduled for compliance sampling and let run until the water quality produced is judged to be what is produced under normal operating conditions. If sampling after a direct pumping tank, then start at step 2.
2. Flush through the sampling point.
3. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.
4. Fill the four 1-Liter amber bottles for PCBs to their shoulder. Cap and invert the bottles to mix the samples.

5. Fill the four 8 oz jars for diquat and the four 8 oz or 4 oz jars for endothall to their shoulder. Cap and invert the bottles to mix the samples
6. Fill the four 1-Liter amber bottles for SVOCs halfway, add the vial of HCl that is taped to them, continue to fill the bottles to the shoulder. Cap and invert the bottles to mix the samples.
7. For the VOA vials for EDB, herbicides, pesticides/carbamates and glyphosate, fill the vials until a reverse meniscus forms (see photo). Cap, invert the bottles, and tap to ensure that there are no air bubbles present. If air is observed, uncap the vial and add a little sample until there is no air present.

8. The lab will not accept samples if air is present.
9. Label the sample bottles and fill out the COC.
10. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

SOC sampling and analyses must be scheduled with Accurate Labs prior to collecting and delivering the samples to the lab. Accurate only accepts and analyzes these samples on an approximately quarterly basis.

Collecting Stage 2 DBPs (TTHMs and HAA5s)

Bottle Requirements
TTHMs – Two 40-mL Amber VOAs preserved with $Na_2S_2O_3$

HAA5s – 2-60 mL Amber VOAs preserved with Ammonium Chloride

Sampling Location
The location/s in distribution identified on the water systems Stage 2 DBPR Sampling Plan

Sampling Instructions

TTHMs and HAA5s must always be sampled together in order to be counted for compliance purposes.

1. Flush through the sampling point until water main distribution water is coming through the sampling point.
2. Reduce the sample stream and take and record the free residual chlorine as applicable on the COC.

3. Fill the vials until a reverse meniscus forms at the top (see photo). Cap, invert the bottles, and tap to ensure that there are no air bubbles present. If air is observed, uncap the vial and add a little sample until there is no air present in the sample.

4. The lab will not accept samples if air is present
5. Label the sample bottles and fill out the COC.
6. Samples need to be kept at <6°C and if possible, delivered to the lab the same day that they are taken.

Labeling Bottles

Using a permanent marker or pen, at a minimum write directly on the bottle the following information:

- ☐ PWS Name & Number
- ☐ Sample Location (Facility Name or ID)
- ☐ Date & Time of Collection
- ☐ Analysis Requested

Laboratory Chain-of-Custody

The Chain-of-Custody (COC) is an important document that needs to be correctly filled out for a sample result to be used for compliance purposes.

The Accurate Labs COC that should be used for submitting compliance samples has been specifically customized for EPA Region 6 Tribal Drinking Water systems. An example of a blank version of this COC is shown on the next page. You can get the latest version of this COC by contacting either Rose or Matt or under the Resources tab of our Tribal Drinking Water Program webpage located at:

swefc.unm.edu/home/resources/

Make sure to use the correct chain-of-custody that indicates where the invoice should be sent. If the EPA Region 6 Tribal Drinking Water Program pays for the sample analysis, then the invoice should go to the SW EFC. If the Tribal Drinking Water Program does not pay for the sample analysis, then please indicate the address and email at the water system where the invoice should be sent.

* Complete Entire COC to be in Compliance*

☐ RUSH Due Date

EPA Region 6 Drinking Water Chain-of-Custody Record

Accurate

*Denotes required information

PWS ID*	PWS Name
Facility ID* (check sampling schedule)	**Facility Name**
Sampling Point ID* (EP, or RAW, or see DW Plan)	**Sampling Location**

Sample Information:

Is sample for Compliance?

If Yes, ☐ Routine or ☐ Confirmation?
If No, ☐ Special

☐ Grab or ☐ Composite?

☐ Finished or ☐ Raw Water?

Water chlorinated? ☐ No ☐ Yes Free Residual Chlorine _____ mg/L

Analysis Requested

Accurate Work Order #	Date Sample Taken	Time Sample Taken	Container Type and Number	Preservative Type	**Nitrate-Nitrite** (preserved with H2SO4)	**IOCs** (Total Cyanide, Fluoride, Arsenic, Antimony, Barium, Beryllium, Cadmium, Chromium, Mercury, Selenium, Thallium)	**VOCs**	**SOCs** (2,4-D / 2,4,5-TP (Silvex) / Alachlor (Lasso) / Atrazine / Benzo(a)pyrene (PAHs) / Carbofuran / Chlordane / Dalapon / Di(2-ethylhexyl) adipate / Di(2-ethylhexyl) phthalate / 1,2 - Dibromo-3-chloropropane (DBCP) / Dinoseb / Diquat / Endothall / Endrin / Ethylene dibromide / Glyphosate / Heptachlor / Heptachlor epoxide / Hexachlorobenzene / Hexachlorocyclopentadiene / BHC-Gamma (Lindane) / Methoxychlor / Oxamyl (Vydate) / Pentachlorophenol / Picloram / Polychlorinated biphenyls PCBs (Aroclors) / Simazine / Toxaphene))	**Radionuclides** (gross alpha, gross beta, combined radium 226/228, combined uranium)	Trihalomethanes (TTHMs) & Haloacetic Acids (HAA5s) - **DBPs**		

Comments

- - All Glass containers provided by Accurate Labs have Teflon lined lids - - -
- - All samples are scheduled to be disposed of in 4 weeks of receipt at Accurate. - -
- - Hazardous samples will be returned to client or will be disposed of for a fee - -

Certification by Company Official: I hereby certify that the above sampling occurred during a period such that the sample(s) is/are representative of a typical/operating day/discharge for the above facility. Signature: Date/Time:

Sampled By: Company:

Relinquished By:	Date/Time	Received By:	Date/Time
☐ Relinquished to Lab By: ☐ Relq'd to Lab's Fridge By:	Date/Time	Received at Lab By: Rec'd °C	Date/Time

Mail Report To Water Utility Regulatory Compliance Officer:

Address:

Phone #: ( ) Fax # ( ) Email:

Email Invoice To: Southwest EPC swefetribal@umn.edu
Tribal Drinking Water Program Bid # -
Address: MSC01 1070
1 University of New Mexico PO # -
Albuquerque, NM 87131-0001
Phone #: (505) 681-7435 Fax #: None

Please also e-mail reports to: hugo-figueroa.jose@epa.gov, footepot.alison@epa.gov, abshire.andrea@epa.gov, and swefetribal@umn.edu

www.accuratelabs.com (800) 516-5227	505 South Lowry Street Stillwater, OK 74074	Phone: (405) 372-5300 Fax: (405) 372-5396	3910 E. 51st Street Tulsa, OK 74135	Phone: (918) 663-5400 Fax: (918) 663-6300	12036 N. Pennsylvania Oklahoma City, OK 73120	Phone: (405) 751-3132 Fax: (405) 751-3108

Updated February 2021

COC Best Practices

1. DO NOT USE any other Accurate Labs COC except for the EPA Region 6 Drinking Water COC for SDWA compliance sampling.

2. STOP using old versions of the EPA Region 6 Drinking Water COC.

3. ONLY USE the most recent version of the COC (February 2021). You can always find the most recent version of the COC on the SW EFC website here (under "Topics" pick "SDWA Compliance Sampling"):

   swefc.unm.edu/home/resources/

4. Use a different Chain-of-Custody (COC) for each sampling location.

5. Do not make duplicate requests for the same contaminant or contaminant group on the same COC.

   For Example – VOC sampling has three different bottles that need to be filled. Do not fill out the COC so that you use three different rows to request VOC analysis. Just use one row and write down the container type and number.

6. DO NOT use white-out or correction tape on the COC. To make corrections use a single line through the incorrect information (must still be able to read what's underneath). Initial and date the correction and add the corrected information next to the incorrect information.

Instructions for Filling out the COC

7. **Use a different Chain-of-Custody (COC) for each sampling location.**

8. ****** Do not make duplicate requests for the same contaminant or contaminant group on the same COC. ******

9. Starting at the top left of the COC, fill out the Sample Information section using the definitions below:
    a. **Routine** - Samples taken for compliance with the Safe Drinking Water Act (SDWA). Refer to the EPA Sampling Schedule for each PWS.
    b. **Confirmation** - Samples are for compliance purposes and are taken at the request of EPA Region 6 to verify the level of a specific contaminant or contaminant group.
    c. **Special** - Samples taken are not for compliance with SDWA.
    d. **Grab** - A single sample collected at a time and place that represents the composition of the water only at that time and place.
    e. **Composite** - A series of small samples taken over a given time period and combined as one sample to provide a summary of water quality.
    f. **Finished** - Samples are taken after the treatment process at the entry point. If there is no treatment process, then the water is considered finished water.
    g. **Raw** - Samples are taken before the treatment process and represent the water quality of the water source.

10. If sampling for SDWA compliance purposes at the Entry Point (EP) to Distribution, use the metal tag or the Sampling Schedule for the water system and on the COC, fill out **PWS ID**, **Facility ID**, **Sampling Point ID**, **PWS Name**, and **Facility Name**. This information is required for compliance purposes. You may fill out **Sampling Location** with a local name or you may leave it blank. If sampling for chlorinated disinfection byproducts (DBPs) in distribution as part of the Stage 2 DBP Rule, use a Facility ID of **01000** and a Facility Name of **DS**. Refer to your Stage 2 DBP Sampling Plan for the correct Sampling Point ID.

11. If you are sampling finished water and the system is disinfected with chlorine, mark **Yes** and take a Free Chlorine Residual and write it down in this box. If the system is not disinfected mark **No**.

12. For each requested contaminant or contaminant group, use one row and mark the Date and Time the sample was collected. Also write down the Container Type and Number as well as the Preservative Type. If the request has multiple containers and preservatives (like SOCs), then mark as 'Various' in these boxes. Put an **X** in the appropriate row under the contaminant/contaminant group for which you are requesting analysis be done.

13. Certify that the samples were taken under normal operating conditions by signing this COC, record the Date & Time as well as the name of the person taking the samples and who they work for.

14. Fill out the contact information for where the report should be mailed.

15. If the compliance sample is for a water system that is having their samples paid for through the Southwest Environmental Finance Center's (SW EFC) Tribal Drinking Water Program, make sure that the "Mail Invoice To" section contains the information for the SW EFC. If the sampling is not for compliance purposes, or the water system is considered by EPA to be "for-profit" and pays for its own compliance samples, make sure that the "Mail Invoice To" section contains the information needed for Accurate Labs to bill the water system.

16. Make sure to sign this COC with the Date and Time whenever the sample and COC are transferred from one individual to the next or when delivered to the lab.

Delivering Samples to the Lab

Samples must be kept cold between when the samples are collected and when they are delivered to the lab.

Samples should be delivered to the lab the same day they are collected. If something comes up and you are not able to drop off the samples at the lab the same day they are collected, the sample should be kept cold (<6°C) until they are dropped off at the lab. You should be aware of the Hold Times in Table 2 that are associated with each sample type.

Be aware that SOC sampling must be scheduled ahead of time with Accurate Labs since the lab only accepts SOC samples at very specific times.

Be aware of any changes to the normal laboratory schedules for sample acceptance especially around major holidays.

Pickup any sample bottles needed for future sample collection requirements.

EPA Region 6 Drinking Water Contaminant Groups

Disinfection By Product Rule (DBPR)

For systems using chlorine disinfection:
Total Trihalomethanes (TTHMs) - chloroform, bromoform, bromodichloromethane, dibromochloromethane

Haloacetic Acids (HAA5s) - monochloracetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid

For systems using ozone disinfection:
Bromate

For surface water systems using conventional filtration and disinfection:
Raw water alkalinity, raw water total organic carbon (TOC), treated water TOC

Inorganic Chemicals (IOCs) – 11

Drinking Water Metals (9) - arsenic, antimony, barium, beryllium, cadmium, chromium, mercury, selenium, thallium

Total Cyanide

Fluoride

Volatile Organic Chemicals (VOCs) – 21

benzene / carbon tetrachloride / chlorobenzene / o-dichlorobenzene / p-dichlorobenzene / 1,2-dichloroethane / 1,1-dichloroethylene / cis-1,2-dichloroethylene / trans-1,2-dichloroethylene / dichloromethane / 1,2-dichloropropane / ethylbenzene / styrene / tetrachloroethylene / toluene / 1,2,4-trichlorobenzene / 1,1,1-trichloroethane, 1,1,2-trichloroethane / trichloroethylene / vinyl chloride / xylenes (total)

Synthetic Organic Chemicals (SOCs) – 29

2,4-D / 2,4,5-TP (Silvex) / alachlor (Lasso) / atrazine / benzo(a)pyrene (PAHs) / carbofuran / chlordane / dalapon / di(2-ethylhexyl) adipate / di(2-ethylhexyl) phthalate / 1,2 – dibromo-3-chloropropane (DBCP) / dinoseb / diquat / endothall / endrin / ethylene dibromide / glyphosate / heptachlor / heptachlor epoxide / hexachlorobenzene / hexachlorocyclo-pentadiene / BHC-gamma (Lindane) / methoxychlor / oxamyl (Vydate) / pentachlorophenol / picloram / polychlorinated biphenyls (PCBs) (Aroclors) / simazine / toxaphene

Gross Alpha, Combined Radium (226/228) and Uranium (Radionuclides – 4)

alpha emitters (gross alpha) / beta/photon emitters (gross beta) / radium 226 & 228 (combined) / uranium (combined)

Lead & Copper Rule (LCR)

Coordinate with John Baker at EPA Region 6 at 214-665-7542 or at Baker.JohnE@epa.gov

Definitions & Abbreviations

Caustic – Capable of burning, corroding, dissolving, or eating away by chemical action.

COC – Chain-of-Custody

DBP – Disinfection Byproduct

Direct Pumping – Used to describe a water storage tank where the inlet is separate from the outlet.

EPA – Environmental Protection Agency

EP – Entry Point to the Distribution System – Identified by a metal tag containing sampling point information.

H_2SO_4 – Sulfuric Acid – A preservative used for nitrate+nitrite samples.

HAA5 – Haloacetic Acids (DBP formed from chlorination)

HCl – Hydrochloric Acid – A preservative used for some VOC and some SOC samples.

HNO_3 – Nitric Acid – A preservative used for Drinking Water Metals and Radionuclides.

Hold Time – The time allowed between a sampling event and when sample analysis must occur.

IOC – Inorganic Contaminant

NaOH – Sodium Hydroxide – A preservative used for Total Cyanide.

PWS – Public Water System

RCO – Regulatory Compliance Officer

SDWA – Safe Drinking Water Act

SOC – Synthetic Organic Contaminant

Trip Blank – A sample of analyte-free media taken from the laboratory to the sampling site and returned to the laboratory unopened. A trip blank is used to document contamination attributable to shipping and field handling procedures.

TTHMs – Total Trihalomethanes (DPBs formed from chlorination.

VOA Vial – Volatile Organic Analysis Vial

VOC – Volatile Organic Contaminant

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Notes

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