

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
Hall Environmental Analysis
Laboratories

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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 Hall Laboratories in Albuquerque, NM for SDWA chemical and radionuclide compliance sample testing.

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 Albuquerque 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 Hall Lab in Albuquerque at **(505) 345-3975**.

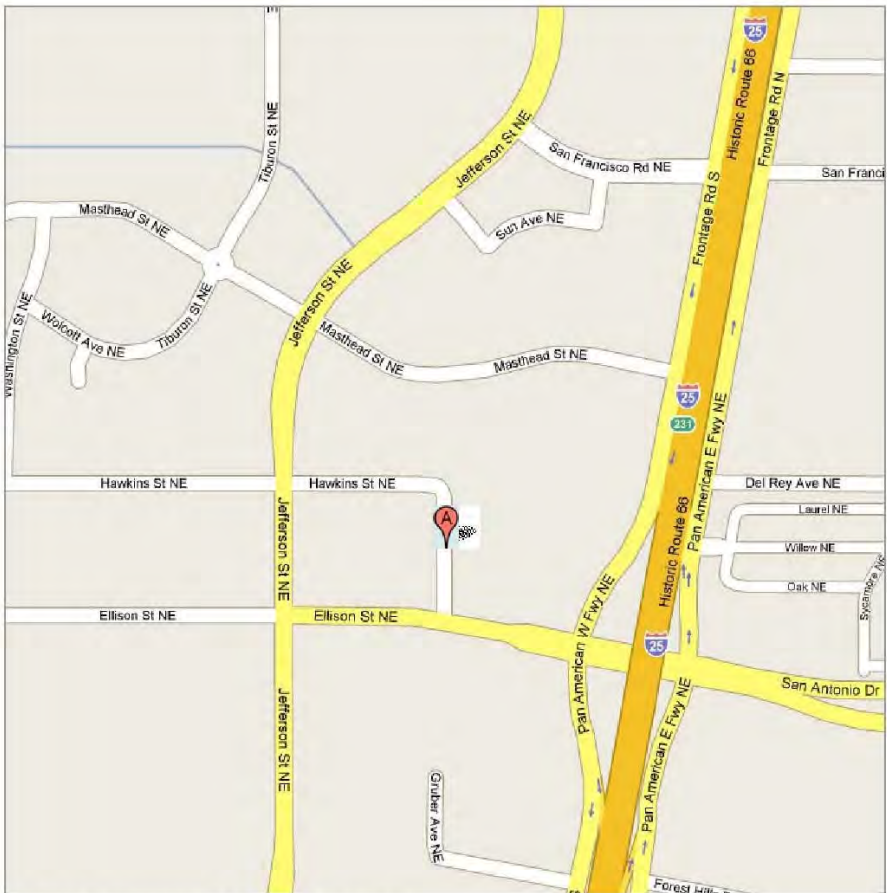
******When ordering bottles, be sure to tell the person at Hall Lab that the bottles are for an EPA Region 6 Tribal Drinking Water System******

**Table 1 – Sample Bottles to Order
From Hall Lab (505) 345-3975**

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

Picking up Bottles – Map to Hall Lab

Hall Lab is located at 4901 Hawkins St NE, Suite #D in Albuquerque. 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. Also, make sure that **Sample Request ID Number Labels** have been included with your order. These labels go on the on bottles and on the chain-of-custody (COC).



A. Hall Environmental Analysis Laboratory

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
- Sample Request ID Number Labels (HALxxxxxx)
- 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 which chemical or chemical group it is for.

**Table 2 - Hall Lab Chemical, Radionuclide & DBP
Sample Bottles, Preservatives & Hold Times**

Chemical	Bottle	Preservative	Hold Time
Nitrate	125 mL plastic	< 6° C	48 hours
Nitrite	125 mL plastic	< 6° C	48 hours
Nitrate+Nitrite	125 mL plastic	< 6° C & H ₂ SO ₄	28 days
IOCs – Fluoride	125 mL plastic	< 6° C	28 days
IOCs – Total Cyanide	500 mL brown plastic	< 6° C, Ascorbic Acid & post NaOH	14 days
IOCs – Drinking Water Metals	250 mL plastic	< 6° C & HNO ₃	6 months (mercury 28-days)
Radionuclides (Uranium, Gross Alpha/Beta, Combined Radium^{226/228})	4-1 Liter bottles and 1-250 mL bottle	HNO ₃	6 months
VOCs	3-40 mL VOAs with no headspace	< 6° C & HCl (Ascorbic Acid for Chlorinated samples)	14 days
SOCs	Variety – see Table 3	< 6° C & variety – see Table 3	14 days
DBP – TTHM	3-40 mL VOAs with no headspace	< 6° C & Sodium Thiosulfate	14 days
DBP – HAA5	3-40 mL VOAs with no headspace	< 6° C & Ammonium Chloride	14 days

Table 3 – Hall Lab Full SOC Kit Contents

Chemical/s	Container	Preservative
Diquat	1-250 mL Plastic	Sodium Thiosulfite
515.3 Herbicides & 548 Endothall	500 mL Amber	Sodium Thiosulfite
525.2 SemiVolatiles	2-1 L Ambers	Sodium Thiosulfite +1 bottle with HCl
504.1 EDB/DBCP	2-40 mL VOAs	Sodium Thiosulfite
Glyphosphate	1-40 mL VOA	Sodium Thiosulfite
539.2 Carbamates	2-40 mL VOAs	Sodium Thiosulfite + Potassium Dihydrogen Citrate
505-Pesticides	1-40 ml VOA	Sodium Thiosulfite

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 Hall Lab 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

1-125 mL plastic bottle
preserved with H₂SO₄ (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 125-mL plastic bottle for Nitrate-Nitrite to the shoulder. Cap and invert the bottle to mix the sample.
5. Label the sample bottle, add the Sample Request ID Number Label 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

1-125 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 125-mL plastic bottle (unpreserved) for Fluoride to the shoulder and cap the sample.
5. Label the sample bottle, add the Sample Request ID Number Label and fill out the COC
6. Samples need to be kept at $<6^{\circ}\text{C}$ and if possible, delivered to the lab the same day that they are taken.

Collecting Drinking Water Metals (IOC)

Bottle Requirements

1-250 mL plastic bottle
preserved with HNO₃
(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, add the Sample Request ID Number Label 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

1-500 mL brown plastic bottle preserved with Ascorbic Acid and a vial of NaOH (sodium hydroxide) taped to 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, add the Sample Request ID Number Label and fill out the COC.
6. Samples need to be kept at $<6^{\circ}\text{C}$ and if possible, delivered to the lab the same day that they are taken.



Collecting Radionuclides

Bottle Requirements

4-1 Liter and 1-250 mL plastic bottles preserved with HNO₃ (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 each of the four 1-Liter bottles and the 250-mL bottle to the shoulder. Cap and invert the bottles to mix the samples.
5. Label the sample bottles, add the Sample Request ID Number Labels 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 Combined Uranium or Total Arsenic

Bottle Requirements

1-250 mL plastic bottle
preserved with HNO₃
(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 250-mL plastic bottle for Drinking Water Metals to the shoulder. Cap and invert the bottle to mix the sample.
5. Label the sample bottle, add the Sample Request ID Number Label 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

3-40 mL VOA vials with ascorbic acid for chlorinated samples and an HCl (hydrochloric acid) preservative dropper bottle.

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.

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 three 40-ml VOA vials halfway.
5. Add **7 drops** of hydrochloric acid to each vial.

6. Fill the vials the rest of the way 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.



7. The lab will not accept the samples if air is present.
8. Label the sample bottles, add the Sample Request ID Number Labels and fill out the COC.
9. Samples need to be kept at $<6^{\circ}\text{C}$ and if possible, delivered to the lab the same day that they are taken.

Collecting SOC's



Bottle Requirements

Various – See Table 2 “Hall Lab 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.

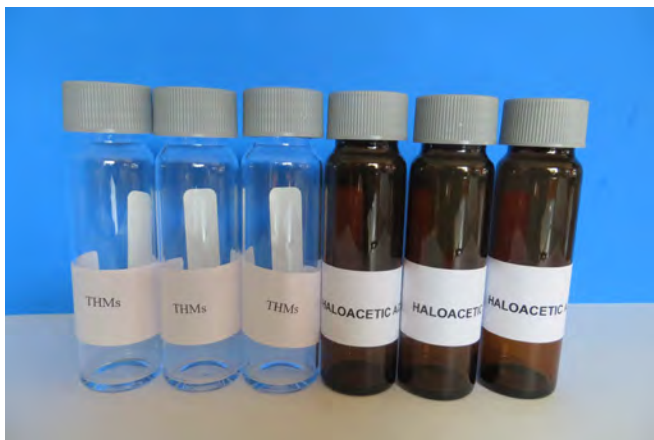
Samples need to be kept at $<6^{\circ}\text{C}$ and delivered to the lab the same day that they are taken

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 larger bottles to their shoulder. Cap and invert the bottles to mix the samples.
5. Fill the 1-Liter amber bottle with the hydrochloric acid vial taped to it halfway, add the vial of HCl, continue to fill the bottle to the shoulder. Cap and invert the bottle to mix the sample.
6. For the six 40-mL VOA vials, 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.
7. The lab will not accept samples if air is present.
8. Label the sample bottles, add the Sample Request ID Number Labels and fill out the COC.
9. Samples need to be kept at $<6^{\circ}\text{C}$ and if possible, delivered to the lab the same day that they are taken.



Collecting Stage 2 DBPs (TTHMs and HAA5s)



Bottle Requirements

TTHMs – Three 40-mL Clear VOAs preserved with Sodium Thiosulfate

HAA5s – Three 40-mL Amber VOAs preserved with Ammonium Chloride

Sampling Location

The location/s in distribution identified on the water systems Stage2 DBPR Sampling Plan.

Sampling Instructions

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

1. Flush through the sampling point until 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, add the Sample Request ID Number Labels and fill out the COC.
6. Samples need to be kept at $<6^{\circ}\text{C}$ and if possible, delivered to the lab the same day that they are taken.



Labeling Bottles

It is a requirement to label the sample bottles using the Hall Lab **Sample Request ID Number Labels**. For each sample request, put the label/s on the sample bottle/s and put a duplicate label on the COC in the correct location for that request.

For example, when labeling VOC bottles with Sample Request ID Number Labels, each of the 3 VOC sample bottles should be labeled using an identical Sample Request ID Number Label. In addition, another identical Sample Request ID Number Label should be placed in the appropriate spot on the COC where you are requesting that VOCs be analyzed.

Sometimes you might have some of the same Sample Request ID Number Labels leftover after you label the bottles and the COC. If this is the case, throw away the leftover labels.

In addition to the Sample Request ID Number Labels it is advisable to use a permanent marker and 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 Hall Lab 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 from the lab, or by contacting either Rose or Matt, or under the Resources section of our webpage located at:

swefc.unm.edu/home/resources/

COC Best Practices

1. DO NOT USE any other Hall 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.



Hall Environmental Analysis Laboratory

COC Acceptance Policy

HEAL will not accept samples that are accompanied by a COC that contains white-out or correction tape. Additionally, failure to properly correct errors on a COC could result in the data no longer being considered legally defensible.

When a COC is received with any of the following:

- 1.) Missing information,
- 2.) Illegible writing,
- 3.) Scribbles, and/or
- 4.) Overwriting

Analysis Requested:			
Additional Analytical Requests:			
CHAIN OF CUSTODY MUST BE FILLED OUT FOR ALL COC			
Sample was Collected By:	Print Name	Sampler / Operator ID #	Date of Collection MM/DD/YY
Jane Doe	JD	JD	10/16/20
Sample Evidentiary Seals - <input type="checkbox"/> Not Present <input type="checkbox"/> Present & Intact <input type="checkbox"/> Present & Damaged			

Annotations: A box labeled 'Missing information' points to the 'Analysis Requested' field. Three boxes labeled 'Scribbles', 'Overwriting', and 'Illegible writing' point to the 'Sampler / Operator ID #', 'Date of Collection', and 'Time of Collection' fields respectively.

For **Coliform** samples – HEAL will require the sampler to fix the error(s) on the COC in person on the same day the sample(s) is/are received. Failure to correct the COC(s) within this timeframe will result in the sample(s) being rejected by HEAL.

For **Chemical** samples – HEAL’s objective is to notify the sampler within 48 hours of sample receipt and request that the COC be fixed and resubmitted. The sampler will be given 7 days to fix the error(s) and resubmit, otherwise the sample(s) will be rejected.

Error Correction Policy

When making corrections or edits to a COC the following items are **prohibited**:

- White-out and/or correction tape,
- Scribbling and/or writing over an entry,
- Blacking out or making the original entry indiscernible,
- Pencil or any type of erasable ink, and
- Electronic signatures

To properly correct an erroneous entry, draw a single line through the entry making sure that the original entry is still legible, and initial and date next to the entry so that the person making the change is easily identifiable. To add missing information, write in the requested information and then initial and date next to the entry.

Analysis Requested:			
Additional Analytical Requests:			
CHAIN OF CUSTODY MUST BE FILLED OUT FOR ALL COC			
Sample was Collected By:	Print Name	Sampler / Operator ID #	Date of Collection MM/DD/YY
Jane Doe	JD	JD	10/15/20
Sample Evidentiary Seals - <input type="checkbox"/> Not Present <input type="checkbox"/> Present & Intact <input type="checkbox"/> Present & Damaged			

Annotations: A box labeled 'Fluoride: JD 10/16/20' points to the 'Date of Collection' field. A box labeled 'Erroneous entries are crossed out with a single line and neatly corrected. Each correction is initialed and dated.' points to the 'Sampler / Operator ID #' and 'Date of Collection' fields. A box labeled 'Information is added and initialed and dated.' points to the 'Print Name' field. A box labeled '1307 JD 10/16/20' points to the 'Time of Collection' field.

Instructions for Filling out the COC

1. Starting at the top left of the COC, fill out the contact information for the Client (Water Utility) and the Regulatory Compliance Officer (RCO) for the Public Water System (PWS) (this is the who the report will be sent to).
2. 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.

3. If sampling for SDWA compliance purposes at the Entry Point to Distribution, use the metal tag or the Sampling Schedule and on the COC, fill out PWS ID, Facility ID, Sampling Point ID (use EP), 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.
 - a. If sampling for chlorinated disinfection byproducts (DBPs) in distribution, use a Facility ID of **01000**, a Facility Name of **DS**. Some examples for the correct Sampling Point ID for Stage 2 DBPs are DBPMAX, DBP01, DBP02, DBP03, etc...Refer to your Stage 2 DBP Sampling Plan for the correct Sampling Point ID.
4. Under Sampler fill out the full name of the person collecting the samples.
5. 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**.
6. 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 or DBPs), then mark as 'Various' in these boxes. Put an X in the appropriate row under the group for which you are requesting analysis be done.

7. For each request (row) put a Sample Request ID# label in the correct spot on this COC and then place the duplicate Sample Request ID# Labels on the corresponding sample bottles for that request.

8. 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 samples should be kept cold ($<6^{\circ}\text{C}$) 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 of any changes to the normal laboratory schedules for sample acceptance especially around major holidays.

Pickup any sample bottles and Sample Request ID Number Labels needed for future sample collection requirements.

*****Hall is currently employing a no contact drop off procedure for samples. They have a tent set up out front with different tables for sample drop off and sample kit pickup. Call 505-345-3975 if no one comes out when you arrive to ensure that Hall is aware you are dropping off samples.*****

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) - monochloroacetic 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

Radionuclides – 4

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

H₂SO₄ – 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.

HNO₃ – 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

Sample Request ID Number Labels – Number labels issued by Hall Lab that are meant to identify which sample request on the COC is associated with which bottle/s.

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

Contact Information

Hall Lab

505-345-3975

Matt Ziegler

Southwest EFC

505-681-7435

mattz@unm.edu

Rose Afandi

Southwest EFC

505-620-5191

rafandi@unm.edu

Angela Restivo

EPA Region 6

Chief, Drinking Water Section

214-665-7123

Resitvo.Angela@epa.gov

Alison Fontenot

EPA Region 6

Coordinator, Tribal Drinking Water Program

214-665-7482

fontenot.alison@epa.gov

Jatin Mistry

EPA Region 6

Stage 2 DBP Rule Contact

214-665-7483

Mistry.Jatin@epa.gov

José Rodriguez

EPA Region 6

Lead & Copper Rule Contact

Revised Total Coliform Rule Contact

214-665-8087

rodriguez.jose@epa.gov

Notes



SOUTHWEST
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FINANCE CENTER



Prepared by the Southwest Environmental Finance Center
at the University of New Mexico
under funding from EPA Region 6