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DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Safe Drinking Water

RTCR Sample Siting Plan: *Pre-Draft* Forms

**Technical Advisory Committee for
Small Water Systems Meeting**

Dec. 18, 2014

Objectives

- Review the Sample Siting Plan Federal Regulations.
- Look at example Sample Siting plans using the draft forms.
- Solicit comments on the pre-draft forms.

Federal RTCR Reference

Sample Siting Plans are required in **40 CFR §141.853**

(a) Sample siting plans.

(1) Systems must develop a written sample siting plan that:

- Identifies sampling sites and a sample collection schedule
- Is representative of water throughout the distribution system
- Is developed no later than March 31, 2016
- Is subject to state review and revision

Federal RTCR Reference

Sample Siting Plans are required in **40 CFR §141.853**

(a) Sample siting plans:

(2) Systems must collect samples at regular time intervals throughout the month

(5) Systems must identify repeat monitoring locations in the sample siting plan

Federal RTCR Reference

State review of plans is required in **40 CFR §142.16(q)(2)(i)**

(q) Requirements for States to adopt the Revised Total Coliform Rule:

(i) Sample Siting Plans—The frequency and process used to review and revise sample siting plans to determine adequacy.

Sample Siting Plan Form Summary

Three separate forms; separated by required sample #s

Form Title	
1	FORM 1: RTCR Sample Siting Plan Form For Public Water Systems with <u>One Routine Sample Location</u>
2	FORM 1: RTCR Sample Siting Plan Form Instructions
3	FORM 2: RTCR Sample Siting Plan Form For Public Water Systems Identifying <u>2 to 20 Routine Sample Locations</u>
4	FORM 2: RTCR Sample Siting Plan Form Instructions
5	FORM 3: RTCR Sample Siting Plan Form For Public Water Systems Identifying more than <u>20 Routing Sample Locations</u>
6	FORM 3: RTCR Sample Siting Plan Form Instructions

▶ Sample Siting Plan Form Addendums

Addendums for any information that needs to be added

Form Title	
7	Addendum A – Limited Site Access Descriptions
8	Addendum B – Additional Sample Location Tables
9	Addendum C – Additional Sample Schedules

Form 1 Example

11/2014



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

FORM 1: RTCR SAMPLE SITING PLAN FORM

For Public Water Systems with One Routine Sample Location

Date Plan Updated: 10/15/2015

Part 1: General System Information

Water System Name:	Flowing Waters MHC	PWSID:	5656565
Mailing Address:	2 Walter Lane Anytown PA 77777		
Contact Person:	Wade N. Deeply		
Phone:	555-555-4567	Email:	wade@flowingwaters.com
System Type:	<input checked="" type="checkbox"/> CWS <input type="checkbox"/> NTNCWS <input type="checkbox"/> TNCWS		
Seasonal System:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Population Served:	617		
Source Types: (check all that apply)	<input type="checkbox"/> Surface Water <input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> GUDI (Groundwater under direct influence of surface water)	<input type="checkbox"/> Unfiltered Surface Water or GUDI <input type="checkbox"/> Purchased Surface Water <input type="checkbox"/> Purchased Ground Water <input type="checkbox"/> Purchased GUDI	Selling finished water to any other public water system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Disinfection Treatment Used: (check all that apply)	<input checked="" type="checkbox"/> Chlorine <input type="checkbox"/> UltraViolet <input type="checkbox"/> Ozone <input type="checkbox"/> Chloramination <input type="checkbox"/> Chlorine Dioxide		
Distribution map or plumbing diagram reviewed in developing sample siting plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Name(s) of individual(s) or company collecting samples:	Reliable Laboratories		

Form 1 Example

FORM 1: RTCR SAMPLE SITING PLAN FORM

For Public Water Systems with One Routine Sample Location

Date Plan Updated: 10/15/2015

Part 1: General System Information

Water System Name:	Flowing Waters MHC	PWSID:	5656565
Mailing Address:	2 Walter Lane Anytown PA 77777		
Contact Person:	Wade N. Deeply		
Phone:	555-555-4567	Email:	wad@flowingwaters.com

Seasonal System:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Population Served:	617		
Source Types: (check all that apply)	<input type="checkbox"/> Surface Water <input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> GUDI <small>(Groundwater under direct influence of surface water)</small>	<input type="checkbox"/> Unfiltered Surface Water or GUDI <input type="checkbox"/> Purchased Surface Water <input type="checkbox"/> Purchased Ground Water <input type="checkbox"/> Purchased GUDI	Selling finished water to any other public water system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Disinfection Treatment Used: (check all that apply)	<input checked="" type="checkbox"/> Chlorine <input type="checkbox"/> UltraViolet <input type="checkbox"/> Ozone <input type="checkbox"/> Chloramination <input type="checkbox"/> Chlorine Dioxide		
Distribution map or plumbing diagram reviewed in developing sample siting plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Name(s) of individual(s) or company collecting samples:	Reliable Laboratories		

Form 1 Example

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FORM 1: RTCR SAMPLE SITING PLAN FORM

Seasonal <input type="checkbox"/> For Public <input checked="" type="checkbox"/> Systems <input type="checkbox"/> No <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Single Location <input type="checkbox"/>		
Population Served:	617	
Source Types: (check all that apply)	<input type="checkbox"/> Surface Water <input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> GUDI (Groundwater under direct influence of surface water)	<input type="checkbox"/> Unfiltered Surface Water or GUDI <input type="checkbox"/> Purchased Surface Water <input type="checkbox"/> Purchased Ground Water <input type="checkbox"/> Purchased GUDI
Disinfection Treatment Used: (check all that apply)	<input checked="" type="checkbox"/> Chlorine <input type="checkbox"/> UltraViolet <input type="checkbox"/> Ozone <input type="checkbox"/> Chloramination <input type="checkbox"/> Chlorine Dioxide	
Distribution map or plumbing diagram reviewed in developing sample siting plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Name(s) of individual(s) or company collecting samples:	Reliable Laboratories	
Have you identified more than one routine sample location? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Distribution map or plumbing diagram reviewed in developing sample siting plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Name(s) of individual(s) or company collecting samples:	Reliable Laboratories

Form 1: Part 2 Example

Part 2: Sampling Information

A. Sample Location Information Table

Sample Type	Location ID	Site location (address and tap location)	Is site accessibility limited? (check box if yes; describe in 2B)
Distribution (D)	701	18 Walter Lane Anytown, PA 17777 Kitchen sink faucet	<input checked="" type="checkbox"/>
Check (C)	701	Residence from 12 to 14 Walter Lane Kitchen sink	<input checked="" type="checkbox"/>
Check (C)	701	Residence from 15 to 17 Walter Lane Both check samples are upstream because 18 Walter Lane is the end of the distribution Kitchen sink	<input checked="" type="checkbox"/>

Note: Routine distribution (D) compliance samples must be collected monthly.

B. Description of Limited Accessibility: For sites that have accessibility limitations, describe the means for accessing these sites for sampling.

Form 1: Part 2 Example Cont'd

Note: Routine distribution (D) compliance samples must be collected monthly.

- B. **Description of Limited Accessibility:** For sites that have accessibility limitations, describe the means for accessing these sites for sampling:

Samples collected at kitchen sink taps in residences are coordinated with homeowners for both routine and check samples. For routine samples, homeowners are informed of the sampling schedule each year. A courtesy reminder is sent to the homeowner two days before each scheduled routine sampling. Check sample accessibility is coordinated with the homeowner on a case-by-case basis.

- C. **Description of Representative Sampling:** Describe how the routine (D) sample locations identified above is representative of water throughout your system:

Location 701 is the last house served in the distribution so the routine sample represents high water age.

Form 1: Part 3 Example

Part 3: Ground Water Rule Source Water Monitoring

CWS already has 4-Log treatment and doesn't have to do source water monitoring.

Part 3: Ground Water Rule Source Water Monitoring

In the event of a total coliform positive sample, is the system required to perform source water monitoring under the Groundwater Rule? Yes No

If you answered "Yes" to the above question, fill out the table below.

Ground Water Rule Source Water Monitoring	
Source ID	Description of location of raw water sample tap

Form 2 (2-20 locations)

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Part 1: G

Part 2: Sampling Information

A. Sample Location Information

Location ID	Site location (address and tap location)	Check (C) or Distribution (D)	Is site accessibility limited?* (check box if yes)	Representative Location Code** (e.g. 1, 2)
701	XYZ restaurant at 303 Main Street; kitchen sink tap	D	<input type="checkbox"/>	1
701	Businesses at 304 - 308 Main Street; kitchen sink taps (Appendix A has limited accessibility info. at 306 & 308)	C	X	
701	Residential homes at 302 through 298 Main Street; kitchen sink taps (See Appendix A for limited accessibility notes)	C	X	
702	Jeff's Jiffy Mart at 415 North Street; kitchen sink tap	D	<input type="checkbox"/>	1
702	Businesses at 414 & 413; Residential homes at 412-410 Main Street; kitchen sink taps (Appendix A has limited accessibility info. about 413 and 412-410)	C	X	
702	Business at 416; Residential homes at 417-420 Main Street; kitchen sink taps (Appendix A has limited accessibility info. about 416 and 417-420)	C	X	
703	Pine Road Storage Tank; frost free hydrant next to tank	D	<input type="checkbox"/>	1
703	Pine Road maintenance shed sink	C	<input type="checkbox"/>	
703	Pine Road Municipal Park frost free hydrant	C	<input type="checkbox"/>	
704	Anytown Pizza at 102 South Street	D	<input type="checkbox"/>	

* Use "Addendum A" for a location with limited accessibility

** Codes defined in instructions: Dead End: 1, etc, Other = 6

Locations



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Form 2 (2-20 locations)

Part 2: Sampling Information

Location ID	Site location (address and tap location)	Check (C) or Distribution (D)	Is site accessibility limited?* (check box if yes)	Representative Location Code** (e.g. 1, 2)
701	XYZ restaurant at 303 Main Street; kitchen sink tap	D	<input type="checkbox"/>	1
701	Businesses at 304 - 308 Main Street; kitchen sink taps (Appendix A has limited accessibility info. at 306 & 308)	C	X	█
701	Residential homes at 302 through 298 Main Street; kitchen sink taps (See Appendix A for limited accessibility notes)	C	X	█
702	Jeff's Jiffy Mart at 415 North Street; kitchen sink tap	D		
703	Pine Road Storage Tank; frost free hydrant next to tank	D	<input type="checkbox"/>	1
703	Pine Road maintenance shed sink	C	<input type="checkbox"/>	█
703	Pine Road Municipal Park frost free hydrant	C	<input type="checkbox"/>	█
704	Anytown Pizza at 102 South Street	D	<input type="checkbox"/>	█

We'll look at the sample site accessibility Addendum A in a minute

* Use "Addendum A" for a location with limited accessibility
 ** Codes defined in instructions: Dead End: 1, etc, Other = 6

Form 2 (2-20 locations)

Part 2: Sampling Information

A. Sample Location Information

Location ID	Site location (address and tap location)	Check (C) or Distribution (D)	Is site accessibility limited?* (check box if yes)	Representative Location Code** (e.g. 1, 2)
	(See Appendix A for limited accessibility notes)			
702	Jeff's Jiffy Mart at 415 North Street; kitchen sink tap	D	<input type="checkbox"/>	1
702	Businesses at 414 & 413; Residential homes at 412-410 Main Street; kitchen sink taps (Appendix A has limited accessibility info. about 413 and 412-410)	C	X	
702	Business at 416; Residential homes at 417-420 Main Street; kitchen sink taps (Appendix A has limited accessibility info. about 416 and 417-420)	C	X	
703	Pine Road Storage Tank; frost free hydrant next to tank	D	<input type="checkbox"/>	1
703	Pine Road maintenance shed sink	C	<input type="checkbox"/>	
704	Anytown Pizza at 102 So. Street	D	<input type="checkbox"/>	

* Use "Addendum A" for a location with limited accessibility

** Codes defined in instructions: Dead End: 1, etc, Other = 6

Example - Addendum A

ADDENDUM A: Limited Access Descriptions

Addendum A Instructions: Fill out Part 1 for any sample sites with limited access. Submit the addendum with the system's sample siting plan.

Part 1: Limited Accessibility Locations

Location ID	Describe the plan for collecting samples at limited accessibility sites (include location address).
701 (check)	Hair Today Gone Tomorrow barber shop book store at 306 Main Street is only open 9-6 Monday through Saturday. Books and Beans bookstore at 308 Main Street is only open 9-5 Monday through Saturday. Have owner's telephone number in case of need to get into shop after hours.
701 (check)	Residential homes at 302 through 298 Main Street - have owner's telephone numbers in case of need to get kitchen taps samples after hours if knock on doors does not allow entry.
702 (check)	Anytown Public Library at 413 North Street is only open 9-5 Monday through Saturday. Have municipal emergency telephone number in case of need to get into shop after hours.

Form 2 Example (continued)

Part 2B: Sample Schedule Information

B. Sample Schedule

Month	Population Served*	Required # of samples	Sample Locations						Loc ID	Loc ID
			701	702	703	704	Loc ID	Loc ID		
Jan	2,700	3	1	1	1					
Feb	2,700	3	1		1	1				
March	2,700	3	1	1	1					
April	2,700	3	1		1	1				
May	2,700	3	1	1	1					
June	2,700	3	1		1	1				
July	2,700	3	1	1	1					
Aug	2,700	3	1		1	1				
Sept	2,700	3	1	1	1					
Oct	2,700	3	1		1	1				
Nov	2,700	3	1	1	1					
Dec	2,700	3	1		1	1				

B. Sample Schedule

Month	Population Served*	Routine # of samples per month	Sample Locations				Loc ID
			701	702	703	704	
Jan	2,700	3	1	1	1		
Feb	2,700	3	1		1	1	
March	2,700	3	1	1	1		
April	2,700	3	1		1	1	
May	2,700	3	1	1	1		

System switches between sample locations 702 and 704 from month to month to get more representative distribution sampling.

* Include population fluctuations by month if it varies enough to change the required number of samples.

Form 2 Example (continued)

Part 2C: Sample Interval Description

C. Sample Interval Description

Please describe how you plan to ensure that samples are collected at regular intervals throughout the month:

- **Samples are collected at locations 701 and 702 the 1st week of the month and at location 703 the 3rd week of the month.**
- **Location 704 is substituted for location 702 on alternate months.**

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Form 3: More than 20 Locations

B. Monthly Routine Sample Schedule Information Tables:

January			
Population Served:	57,000	Routine Number of Coliform Samples per Month:	60

Number of Samples by Location																		
701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719
2	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1

Number of Samples by Location																		
720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738
2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2



Number of Samples by Location																		
739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757
1	1	1	2	1	1													

Next Steps

- Site Sampling Workshop Training
- RTCR website with training schedule



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QUESTIONS?

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