United States Environmental Protection Agency

Office of Water (4601)

EPA 815-B-06-002
January 2006

INITIAL DISTRIBUTION SYSTEM EVALUATION GUIDANCE MANUAL

FOR THE FINAL STAGE 2 DISINFECTANTS AND DISINFECTION BYPRODUCTS RULE

APPENDIX H

http://www.epa.gov/safewater/disinfection/stage2/compliance.html

This page intentionally left blank.

Appendix H

Example IDSE Standard Monitoring Plan and Report for a Surface Water System Serving 160,000 People

This appendix provides an example IDSE standard monitoring plan and report for a surface water system serving 160,000 people. For this example, the state did not require any modifications to the standard monitoring plan.

Chapter 7 discusses the standard monitoring plan, conducting standard monitoring, selection of Stage 2 DBPR sites, and preparing the IDSE report. The application of the basic guidance on standard monitoring location selection and Stage 2 DBPR compliance monitoring location selection is shown in this example.

This page intentionally left blank.

Form 6: Standard Monitoring Plan

I. GENERAL INFORMATION

A. PWS Information*

B. Date Submitted* Sept 15, 2006

PWSID: US1111111

PWS Name: Elm City

PWS Address: 1234 Main Street

City: Elm City State: US Zip: 99999

Population Served: 160,000

System Type:	Source Water Type:	Buying / Selling Relationships:
☒ CWS	☒ Subpart H	☐ Consecutive System
☐ NTNCWS	☐ Ground	☐ Wholesale System
		☒ Neither

C. PWS Operations

Residual Disinfectant Type: ☒ Chlorine ☐ Chloramines ☐ Other:_____

Number of Disinfected Sources: 2___ Surface ___GWUDI ____ Ground ___ Purchased

D. Contact Person*

Name: Mr. Ronald Doe, P.E.

Title: Water System Superintendent

Phone #: 123-555-0000 Fax #: 123-555-0001

E-mail: Rdoe@ci.elmcity.us

II. IDSE REQUIREMENTS*

A. Number of Sites		B. Schedule	C. Standard Monitoring Frequency
Total:	16		
Near Entry Point:	3	☒ Schedule 1	☐ During peak historical month (1 monitoring period)
Avg Residence Time:	4	☐ Schedule 2	
High TTHM:	5	☐ Schedule 3	☐ Every 90 days (4 monitoring periods)
High HAA5:	4	☐ Schedule 4	☒ Every 60 days (6 monitoring periods)

Form 6: Standard Monitoring Plan

III. SELECTING STANDARD MONITORING SITES

A. Data Evaluated Put a "✓" in each box corresponding to the data that you used to select each type of standard monitoring site. Check all that apply.

Data Type	Type of Site			
	Near Entry Pt.	Avg. Residence Time	High TTHM	High HAA5
System Configuration				
Pipe layout, locations of storage facilities		✓	✓	✓
Locations of sources and consecutive system entry points	✓			
Pressure zones		✓	✓	✓
Information on population density			✓	
Locations of large customers		✓		
Water Quality and Operational Data				
Disinfectant residual data		✓	✓	✓
Stage 1 DBP data			✓	✓
Other DBP data				
Microbiological monitoring data (e.g., HPC)		✓	✓	
Tank level data, pump run times		✓	✓	✓
Customer billing records		✓	✓	✓
Advanced Tools				
Water distribution system model				
Tracer study				

B. Summary of Data* Provide a summary of data you relied on to justify standard monitoring site selection. (*attach additional sheets if needed*)

Both plants operate year round. We used residual and HPC data from Total Coliform sites collected from 2003 through 2005 with our current system map to select sites. We evaluated chlorine residual data from June and July (range from 0.2 - 2.3 mg/L), and calculated our system average (1-1.2 mg/L). We looked for sites with levels close to this average for average residence time sites, although we used HPC data, water age estimates, and pipe data to determine the cause of low residuals. We have estimated our high water age in the distribution system to be near 5 days. We relied on tank and residual data to select high TTHM sites. For high HAA5 sites, we also evaluated HPC data to eliminate areas of suspected biological activity, and Stage 1 sites as a reference point. We plotted all of our candidate sites on our map to ensure that they are geographically and hydraulically diverse.

Form 6: Standard Monitoring Plan

IV. JUSTIFICATION OF STANDARD MONITORING SITES*

Standard Monitoring Site ID (from map)[1]	Site Type	Justification
Standard Monitoring #1	☒ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #2	☒ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #3	☐ Near Entry Pt ☒ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #4	☐ Near Entry Pt ☒ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #5	☐ Near Entry Pt ☒ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #6	☐ Near Entry Pt ☒ Avg. Res. Time ☐ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #7	☐ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☒ High HAA5	See attached sheets.
Standard Monitoring #8	☐ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☒ High HAA5	See attached sheets.

[1] *Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations or need more room.*

Form 6: Standard Monitoring Plan

V. PEAK HISTORICAL MONTH AND PROPOSED STANDARD MONITORING SCHEDULE

A. Peak Historical Month* **July**

B. If Multiple Sources, Source Used to Determine Peak Historical Month
(write "N/A" if only one source in your system)

Both Hardwood WTP and Softwood WTP had same peak historical month based on Stage 1 TTHM data.

C. Peak Historical Month Based On* (check all that apply)

☒ High TTHM ☐ Warmest water temperature

☐ High HAA5

If you used other information to select your peak historical month, explain here
(*attach additional sheets if needed*)

D. Proposed Standard Monitoring Schedule*

Standard Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]					
	period 1	period 2	period 3	period 4	period 5	period 6
SM #1	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #2	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #3	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #4	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #5	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #6	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #7	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #8	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2

[1] Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations.

[2] period = monitoring period. Complete for the number of periods from Section II.C. Can list exact date or week (e.g., week of 7/9/07)

Form 6: Standard Monitoring Plan

VI. PLANNED STAGE 1 DBPR COMPLIANCE MONITORING SCHEDULE*

Stage 1 DBPR Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]			
	Period 1	Period 2	Period 3	Period 4
Stage 1 #1	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #2	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #3	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #4	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #5	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #6	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #7	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2
Stage 1 #8	10/2007, wk 2	1/2008, wk 2	4/2008, wk2	7/2008, wk 2

[1] Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to monitor at more than 8 Stage 1 DBPR sites.

[2] period = monitoring period. Complete for the number of periods in which you must conduct Stage 1 DBPR monitoring during IDSE monitoring. Can list exact date or week (e.g., week of 7/9/07)

VII. DISTRIBUTION SYSTEM SCHEMATIC*

ATTACH a schematic of your distribution system.

Distribution system schematics are not confidential and should not contain information that poses a ***security risk*** to your system. EPA recommends that you use one of two options:

Option 1: Distribution system schematic with no landmarks or addresses indicated. Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.

Option 2: City map without locations of pipes indicated. Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

Form 6: Standard Monitoring Plan

VIII. ATTACHMENTS

- ☒ Distribution System Schematic* (Section VII).
- ☒ Additional sheets for the summary of data or site justifications (Sections III and IV).
- ☒ Additional copies of Page 3 for justification of Standard Monitoring Sites (Section IV). **Required if** you are a subpart H system serving **more than 49,999 people** or a ground water system serving **more than 499,999 people**.
- ☐ Additional sheets for explaining how you used data other than TTHM, HAA5, and temperature data to select your peak historical month (Section V).
- ☒ Additional copies of Page 4 for proposed monitoring schedule (Section V). **Required if** you are a subpart H system serving **more than 49,999 people** or a ground water system serving **more than 499,999 people**.
- ☐ Additional sheets for planned Stage 1 DBPR compliance monitoring schedule (Section VI).

Total Number of Pages in Your Plan 11

Note: Fields with an asterisk (*) are required by the Stage 2 DBPR

Form 6: Standard Monitoring Plan

Attachment #1

IV. JUSTIFICATION OF STANDARD MONITORING SITES*

Standard Monitoring Site ID (from map)[1]	Site Type	Justification
Standard Monitoring #9	☐ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☒ High HAA5	See attached sheets.
Standard Monitoring #10	☐ Near Entry Pt ☐ Avg. Res. Time ☐ High TTHM ☒ High HAA5	See attached sheets.
Standard Monitoring #11	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #12	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #13	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #14	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #15	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.
Standard Monitoring #16	☐ Near Entry Pt ☐ Avg. Res. Time ☒ High TTHM ☐ High HAA5	See attached sheets.

[1] *Site IDs should match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies of this sheet if you are required to select more than 8 standard monitoring locations or need more room.*

Justification of Standard Monitoring Sites Attachment #2

Standard Monitoring #1
Entry point to the distribution system for the southern part of the system (Hardwood Water Treatment Plant). This is where the first group of customers receives water.

Standard Monitoring #2
Entry point to the distribution system for the Softwood River Water Treatment Plant. This location is just after the high service pumps at the Water Treatment Plant.

Standard Monitoring #3
Represents average residence time of water in the southern section of the system. In the summer months, this TCR site typically has chlorine residuals that are close to our calculated system-wide average for the area served by the Hardwood WTP (1.2 mg/L). There are no storage facilities between the treatment plant and this location. The site is on an 8 inch water main.

Standard Monitoring #4
Represents average residence time of water in the southern part of the system. There are no storage facilities between the treatment plant and this location. Although this site is physically close to standard monitoring site #3, site #3 and site #4 are at the edges of different pressure zones. The chlorine residual concentration at this location is typically 30 percent less than the system-wide average (0.8 mg/L) in the summer months. However, we attribute this additional loss of chlorine to the fact that the transmission and distribution lines serving this area are older unlined cast iron and have been observed to show significant build-up of corrosion by-products. The site is on a 12 inch transmission main.

Standard Monitoring #5
Represents average residence time of water in northern part of the system. In the summer months, this TCR site typically has chlorine residuals that are close to our calculated system-wide average for the area served by the Softwood WTP (1.0 mg/L). There are no storage facilities between the treatment plant and this location. The site is in a residential area with predominantly 8 and 10 inch water mains.

Standard Monitoring #6
Represents average residence time in the northern part of the system. Although chlorine residual in the summer months is on the low end of the system-wide average (1.0 mg/L), we think this can be attributed to some older cast iron water mains in the area. Even though it is close in proximity to standard monitoring site #5, it is at the edge of a different pressure zone from Standard Monitoring Site #5. The site is on a 12 inch main.

Standard Monitoring #7
Represents high HAA5 levels. Sample location is in an area approaching the perimeter of the system in the western pressure zone. Chlorine residual at this location ranges between 0.3 and 0.6 mg/L in the summer months, and the HPCs are consistently below 100 cfu/mL year round. The site is on a 6 inch main and is not downstream of any storage facilities.

Standard Monitoring #8
Represents high HAA5 levels in the southern part of the system and is hydraulically downstream of the Oakville Ground Storage Facility, which has a residence time of about 1 ½ days in the summer months. This is a TCR site with residual concentrations ranging from 0.4 to 0.7 mg/L in the summer months and HPCs are usually less than 200 cfu/mL. The site is on an 8 inch water main.

Standard Monitoring #9
Represents high HAA5 levels in the mixing zone. This site is sometimes served by water that is hydraulically downstream of the Weeping Willow Tank. The chlorine residual varies. It is consistently less than 1.0 mg/L but never below 0.4 mg/L and the HPCs are usually low (below 100 cfu/mL). The site is in a commercial area served by 8 and 10 inch water mains.

Standard Monitoring #10
Represents high HAA5 levels in the northern part of the system. The site is not served by any storage facilities, but the location is near the north-western perimeter of the system where we have not historically monitored for TTHM or HAA5. It is in a business district served mainly by 8 inch water mains. The chlorine residual levels at this location range from 0.5 to 0.8 mg/L in the summer, and HPC levels are generally < 100 cfu/mL.

Standard Monitoring #11
Represents high TTHM levels. This site is in the central portion of the system and is served by the Hardwood WTP. It is in a sparsely populated area with larger service lines (10 and 12 inches). Chlorine residuals near this location are on the low side (0.3 - 0.5) in the summer. We are concerned that this area has high water age because of the relatively large pipe size and low demand. We have not historically monitored for TTHM or HAA5 in this area.

Standard Monitoring #12
Represents high TTHM levels. This site is at a location on the northern edge of the central pressure zone, geographically distant from the Hardwood WTP. It is at the entrance to a small subdivision (approx 15 houses) in the Oakville community and is on a 6 inch water line. It is not served by any storage facilities, but residuals in this area are very low in the summer months (< 0.2 mg/L). Also, our operations staff noted that this is a historic problem area in terms of customer complaints of stale or discolored water and chlorine residual maintenance.

Standard Monitoring #13
Represents high TTHM levels in the south-eastern portion of this system on a 4-inch water line. This location has been problematic in the past due to positive total coliform test results, non-detectable chlorine residuals, high heterotrophic plate count results, and odor complaints. A 4-inch blow-off was installed downstream of this location, but it continues to have periodic poor water quality. Although close in proximity, it is at the edge of a different pressure zone from our Stage 1 compliance monitoring site # 8.

Standard Monitoring #14
Represents high TTHM levels. This site is in the mixing zone and is influenced by both the Softwood and Hardwood WTPs. During high demand periods, it receives water from the Appleville Storage Tank, which has a residence time of 2 days in the summer. Chlorine residuals at this location are generally very low, indicating this may be a hydraulic dead end.

Standard Monitoring #15
Represents high TTHM levels in the northwestern corner of the system. This location is downstream from the Cypressville Storage Tank, which has a residence time of 1 to 2 days in the summer. The site is on a 6 inch water main leading into several sparsely populated residential areas. There are often low chlorine residuals in the areas downstream of this tank.

Standard Monitoring #16
Represents high TTHM levels at the edge of the mixing zone. This sampling location is in the mixed zone before the last group of connections near the end of the distribution system. It is on a 6 inch line and receives water from the Cypressville Storage Tank. We have limited chlorine residual data for this area, but operators suspect that it is low in the summer due to the high water age in this area.

Form 6: Standard Monitoring Plan

Attachment #4

V. PEAK HISTORICAL MONTH AND PROPOSED STANDARD MONITORING DATES

A. Peak Historical Month* _____

B. If Multiple Sources, Source Used to Determine Peak Historical Month
(write "N/A" if only one source in your system)

_____

C. Peak Historical Month Based On* (check all that apply)

☐ High TTHM ☐ Warmest water temperature

☐ High HAA5

If you used other information to select your peak historical month, explain here
(*attach additional sheets if needed*)

_____

_____

_____

D. Proposed Standard Monitoring Schedule*

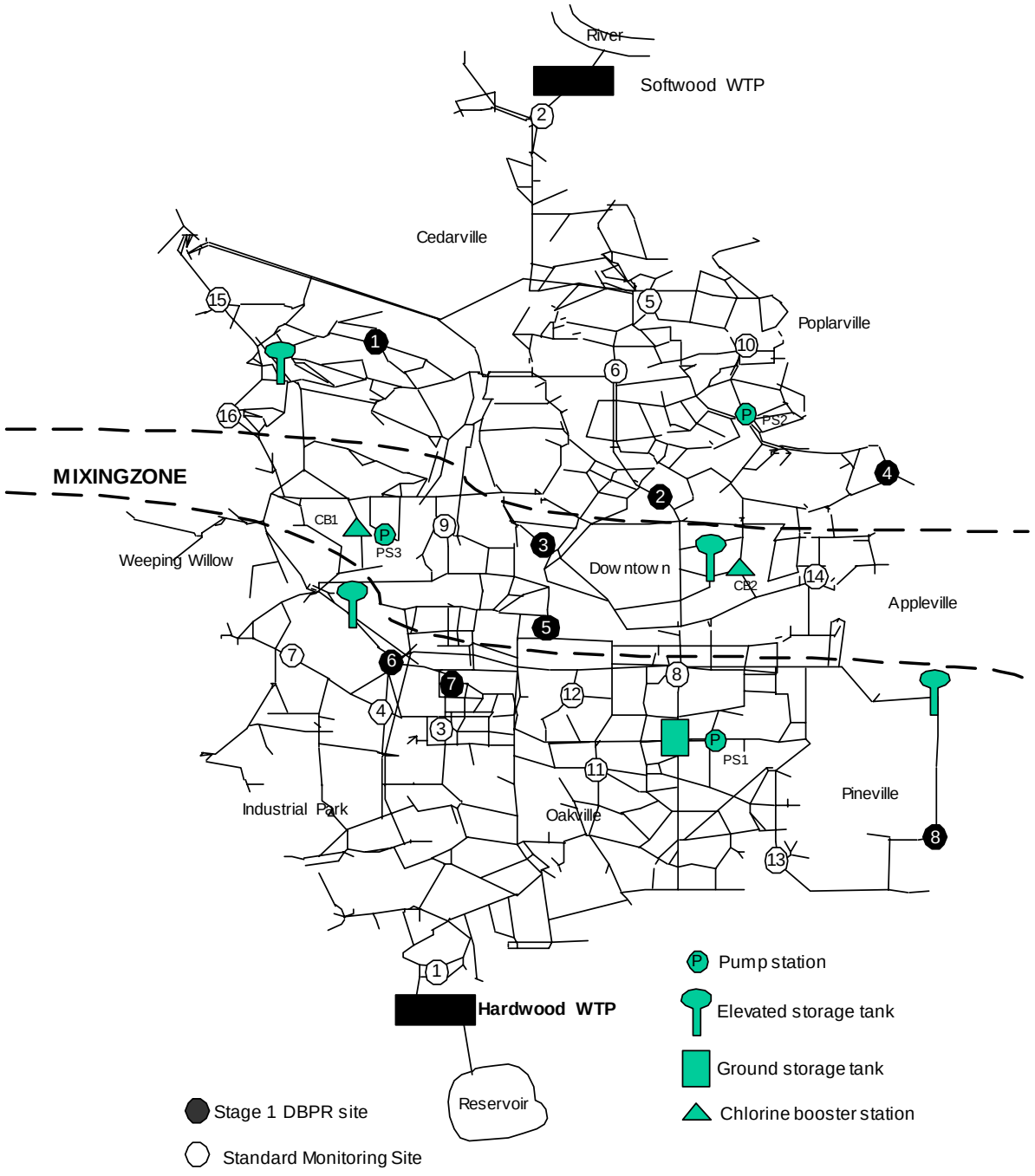
Standard Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]					
	period 1	period 2	period 3	period 4	period 5	period 6
SM #9	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #10	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #11	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #12	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #13	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #14	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #15	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2
SM #16	11/2007, wk 2	1/2008, wk 2	3/2008, wk 2	5/2008, wk 2	7/2008, wk 2	9/2008, wk 2

[1] Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations.

[2] period = monitoring period. Complete for the number of periods from Section II.C. Can list exact date or week (e.g., week of 7/9/07)

Elm City Distribution System Schematic
Scale: 1:5000'

Attachment #5



This page intentionally left blank.

Form 7: IDSE Report for Standard Monitoring

I. GENERAL INFORMATION

A. PWS Information*

B. Date Submitted* Dec 1, 2008

PWSID: US1111111

PWS Name: Elm City

PWS Address: 1234 Main Street

City: Elm City State: US Zip: 99999

Population Served 160,000

System Type:	Source Water Type:	Buying / Selling Relationships:
☒ CWS	☒ Subpart H	☐ Consecutive System
☐ NTNCWS	☐ Ground	☐ Wholesale System
		☒ Neither

C. PWS Operations

Residual Disinfectant Type: ☒ Chlorine ☐ Chloramines ☐ Other:_____

Number of Disinfected Sources: 2__ Surface ___GWUDI ____ Ground ___ Purchased

D. Contact Person*

Name: Mr. Ronald Doe, P.E.

Title: Water Superintendent

Phone #: 123-555-0000 Fax #: 123-555-0001

E-mail: Rdoe@ci.elmcity.us

II. STAGE 2 DBPR REQUIREMENTS*

A. Number of Compliance Monitoring Sites		B. Schedule	C. Compliance Monitoring Frequency
Highest TTHM:	3	☒ Schedule 1	☐ During peak historical month (1 monitoring period)
Highest HAA5:	3	☐ Schedule 2	
Existing Stage 1:	2	☐ Schedule 3	☒ Every 90 days (4 monitoring periods)
Total:	8	☐ Schedule 4	

Form 7: IDSE Report for Standard Monitoring

III. MONITORING RESULTS*

A. Did you deviate in any way from your approved standard monitoring plan? ☒ Yes ☐ No

If YES, explain (attach additional pages if necessary):

The IDSE Monitoring Plan indicated samples should be taken during the second week of March, 2008. Our sampler was very ill this week and could not collect all of the standard monitoring samples. He collected all remaining samples on Monday and Tuesday of the next week.

B. Where were your TTHM and HAA5 samples analyzed?

☒ In-House

Is your in-house laboratory certified? ☒ Yes ☐ No

☐ Certified Laboratory

Name of certified laboratory: _____

C. What method(s) was used to analyze your TTHM and HAA5 samples?

TTHM	HAA5
☐ EPA 502.2	☐ EPA 552.1
☐ EPA 524.2	☐ EPA 552.2
☒ EPA 551.1	☒ EPA 552.3
	☐ SM 6251 B

Form 7: IDSE Report for Standard Monitoring

III. MONITORING RESULTS (Continued)*

D. IDSE Standard Monitoring Results - TTHM

Site ID[1]	Data Type	TTHM (mg/L)						LRAA
Standard Monitoring #1	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.022	0.016	0.028	0.036	0.037	0.030	**0.028**
Standard Monitoring #2	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.031	0.027	0.035	0.031	0.039	0.030	**0.032**
Standard Monitoring #3	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.042	0.033	0.039	0.040	0.048	0.045	**0.041**
Standard Monitoring #4	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.048	0.041	0.047	0.055	0.056	0.043	**0.048**
Standard Monitoring #5	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.025	0.023	0.042	0.048	0.049	0.035	**0.037**
Standard Monitoring #6	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.033	0.017	0.041	0.050	0.058	0.045	**0.041**
Standard Monitoring #7	Sample Date	11/13/07	1/9/08	3/17/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.044	0.026	0.056	0.052	0.070	0.042	**0.048**
Standard Monitoring #8	Sample Date	11/13/07	1/9/08	3/17/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.040	0.035	0.050	0.064	0.064	0.052	**0.051**

[1] *Verify that site IDs for IDSE standard monitoring sites match the site IDs in your Standard Monitoring Plan.*

Attach additional sheets as needed for IDSE standard monitoring results.

Form 7: IDSE Report for Standard Monitoring

III. MONITORING RESULTS (Continued)*

E. IDSE Standard Monitoring Results - HAA5

Site ID[1]	Data Type	HAA5 (mg/L)						LRAA
Standard Monitoring #1	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.030	0.028	0.032	0.027	0.033	0.026	**0.029**
Standard Monitoring #2	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.025	0.026	0.022	0.034	0.030	0.021	**0.026**
Standard Monitoring #3	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.041	0.030	0.022	0.029	0.036	0.040	**0.033**
Standard Monitoring #4	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.027	0.019	0.020	0.025	0.025	0.029	**0.024**
Standard Monitoring #5	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.040	0.028	0.023	0.056	0.040	0.052	**0.040**
Standard Monitoring #6	Sample Date	11/13/07	1/9/08	3/14/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.029	0.019	0.014	0.020	0.021	0.023	**0.021**
Standard Monitoring #7	Sample Date	11/13/07	1/9/08	3/17/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.062	0.035	0.055	0.052	0.052	0.063	**0.053**
Standard Monitoring #8	Sample Date	11/13/07	1/9/08	3/17/08	5/13/08	7/10/08	9/9/08	
	Sample Result	0.049	0.047	0.050	0.059	0.058	0.050	**0.052**

[1] *Verify that site IDs for IDSE standard monitoring sites match the site IDs in your Standard Monitoring Plan.*

Attach additional sheets as needed for IDSE standard monitoring results.

Form 7: IDSE Report for Standard Monitoring

III. MONITORING RESULTS (Continued)*

F. Stage 1 DBPR Compliance Monitoring Results - TTHM

Site ID[1]	Data Type	TTHM (mg/L)				LRAA
Stage 1 #1 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.062	0.045	0.034	0.056	**0.049**
Stage 1 #2 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.045	0.036	0.042	0.045	**0.042**
Stage 1 #3 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.048	0.032	0.034	0.067	**0.045**
Stage 1 #4 (max. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.056	0.042	0.057	0.076	**0.058**
Stage 1 #5 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.042	0.044	0.020	0.062	**0.042**
Stage 1 #6 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.039	0.046	0.049	0.050	**0.046**
Stage 1 #7 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.050	0.041	0.022	0.059	**0.043**
Stage 1 #8 (max. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.060	0.065	0.050	0.073	**0.062**

[1] *Verify that site IDs for Stage 1 compliance monitoring sites match the site IDs in your Standard Monitoring Plan.*

Attach additional sheets as needed for Stage 1 compliance monitoring results.

Form 7: IDSE Report for Standard Monitoring

III. MONITORING RESULTS (Continued)*

G. Stage 1 DBPR Compliance Monitoring Results - HAA5

Site ID[1]	Data Type	HAA5 (mg/L)				LRAA
Stage 1 #1 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.045	0.024	0.032	0.043	**0.036**
Stage 1 #2 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.056	0.047	0.050	0.055	**0.052**
Stage 1 #3 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.049	0.032	0.062	0.045	**0.047**
Stage 1 #4 (max. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.028	0.021	0.025	0.026	**0.025**
Stage 1 #5 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.041	0.034	0.045	0.033	**0.038**
Stage 1 #6 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.041	0.022	0.030	0.039	**0.033**
Stage 1 #7 (avg. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.058	0.048	0.046	0.064	**0.054**
Stage 1 #8 (max. res. time)	Sample Date	10/10/07	1/7/08	4/7/08	7/8/08	
	Sample Result	0.030	0.019	0.022	0.037	**0.027**

[1] Verify that site IDs for Stage 1 compliance monitoring sites match the site IDs in your Standard Monitoring Plan.

Attach additional sheets as needed for Stage 1 compliance monitoring results.

Form 7: IDSE Report for Standard Monitoring

IV. JUSTIFICATION OF STAGE 2 DBPR COMPLIANCE MONITORING SITES*

Stage 2 Compliance Monitoring Site ID	Site Type	Justification
Standard Monitoring #13	☒ Highest TTHM ☐ Highest HAA5 ☐ Stage 1 DBPR	This site had the highest TTHM LRAA among all the sites.
Standard Monitoring #10	☐ Highest TTHM ☒ Highest HAA5 ☐ Stage 1 DBPR	This site had the highest HAA5 LRAA (and was not selected as the highest TTHM site)
Stage 1 #7	☐ Highest TTHM ☐ Highest HAA5 ☒ Stage 1 DBPR	Among the Stage 1 DBPR compliance monitoring locations with average water residence time, this site had the highest HAA5 LRAA
Stage 1 #8	☒ Highest TTHM ☐ Highest HAA5 ☐ Stage 1 DBPR	This site had the second highest TTHM LRAA
Standard Monitoring #14	☒ Highest TTHM ☐ Highest HAA5 ☐ Stage 1 DBPR	This site had the third highest TTHM LRAA
Standard Monitoring # 7	☐ Highest TTHM ☒ Highest HAA5 ☐ Stage 1 DBPR	This site had the second highest HAA5 LRAA
Stage 1 #1	☐ Highest TTHM ☐ Highest HAA5 ☒ Stage 1 DBPR	Among the Stage 1 DBPR compliance monitoring locations with average water residence time, this site had the highest TTHM LRAA. Stage 1 DBPR site #4 had higher TTHM LRAAs but is maximum residence time site, therefore, it was not chosen.
Stage 1 # 2	☐ Highest TTHM ☒ Highest HAA5 ☐ Stage 1 DBPR	This site had the third highest HAA5 LRAA. Standard Monitoring Site #8 had the same LRAA, but we chose to use Stage 1 site #2 to maintain a historical record.

Attach additional copies of this sheet if you need more room.

Form 7: IDSE Report for Standard Monitoring

V. PEAK HISTORICAL MONTH AND PROPOSED STAGE 2 DBPR COMPLIANCE MONITORING SCHEDULE

A. Peak Historical Month* **July**

B. Is Your Peak Historical Month the Same as in Your IDSE Standard Monitoring Plan?

☒ Yes ☐ No

If no, explain how you selected your new peak historical month *(attach additional sheets if needed*)

C. Proposed Stage 2 DBPR Compliance Monitoring Schedule*

Stage 2 Compliance Monitoring Site ID	Projected Sampling Date (date or week)[1]			
	period 1	period 2	period 3	period 4
SM # 13	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
SM # 10	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
Stage 1 # 7	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
Stage 1 # 8	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
SM #14	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
SM # 7	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
Stage 1 # 1	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2
Stage 1 # 2	4/2012 wk 2	7/2012 wk 2	10/2012 wk 2	1/2013 wk 2

[1] *period = monitoring period. Complete for the number of monitoring periods from Section II.C.*

Attach additional copies of this sheet if you need more room.

Form 7: IDSE Report for Standard Monitoring

VI. DISTRIBUTION SYSTEM SCHEMATIC*

ATTACH a schematic of your distribution system if it has changed since you submitted your Standard Monitoring Plan (Form 6).

VII. ATTACHMENTS

- ☐ Additional sheets for explaining how and why you deviated from your standard monitoring plan (Section III).
- ☒ Additional sheets for Standard Monitoring Results (Section III). **REQUIRED** if you are a subpart H system serving **more than 49,999 people** or a ground water system serving **more than 499,999 people**.
- ☐ Additional sheets for Stage 2 DBPR Compliance Monitoring Sites (Section IV). **REQUIRED** if you are a subpart H system serving **more than 249,999 people**.
- ☐ Additional sheets for explaining how you selected the peak historical month (Section V).
- ☐ Additional sheets for proposed Stage 2 DBPR peak historical month and compliance monitoring schedule (Section V). **REQUIRED** if you are a subpart H system serving **more than 249,999 people**.
- ☐ Distribution system schematic* (Section VI). **REQUIRED if it has changed from your approved IDSE standard monitoring plan**.
- ☐ Compliance calculation procedures (for Stage 2 Compliance Monitoring Plan).

Total Number of Pages in Your Report: _11_____

Note: Fields with an asterisk (*) are required by the Stage 2 DBPR

Form 7: IDSE Report for Standard Monitoring

Attachment #1

III. MONITORING RESULTS (Continued)*

D. IDSE Standard Monitoring Results - TTHM

Site ID[1]	Data Type	TTHM (mg/L)						LRAA
Standard Monitoring #9	Sample Date	11/14/07	1/10/08	3/17/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.047	0.033	0.049	0.052	0.062	0.037	**0.047**
Standard Monitoring #10	Sample Date	11/14/07	1/10/08	3/17/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.022	0.020	0.051	0.050	0.052	0.042	**0.040**
Standard Monitoring #11	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.045	0.025	0.062	0.060	0.060	0.064	**0.053**
Standard Monitoring #12	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.061	0.042	0.056	0.050	0.068	0.051	**0.055**
Standard Monitoring #13	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.072	0.032	0.065	0.070	0.085	0.071	**0.066**
Standard Monitoring #14	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.055	0.033	0.068	0.062	0.080	0.062	**0.060**
Standard Monitoring #15	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.052	0.036	0.048	0.056	0.070	0.065	**0.055**
Standard Monitoring #16	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.055	0.031	0.072	0.049	0.068	0.069	**0.057**

[1] *Verify that site IDs for IDSE standard monitoring sites match the site IDs in your Standard Monitoring Plan.*

Attach additional sheets as needed for IDSE standard monitoring results.

Form 7: IDSE Report for Standard Monitoring

Attachment #2

III. MONITORING RESULTS (Continued)*

E. IDSE Standard Monitoring Results - HAA5

Site ID[1]	Data Type	HAA5 (mg/L)						LRAA
Standard Monitoring #9	Sample Date	11/14/07	1/10/08	3/17/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.040	0.034	0.045	0.058	0.065	0.048	**0.048**
Standard Monitoring #10	Sample Date	11/14/07	1/10/08	3/17/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.067	0.058	0.056	0.044	0.065	0.050	**0.057**
Standard Monitoring #11	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.033	0.030	0.042	0.040	0.046	0.038	**0.038**
Standard Monitoring #12	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.028	0.028	0.039	0.045	0.040	0.033	**0.036**
Standard Monitoring #13	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.039	0.033	0.041	0.039	0.062	0.045	**0.043**
Standard Monitoring #14	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.034	0.031	0.042	0.030	0.058	0.038	**0.039**
Standard Monitoring #15	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.034	0.028	0.028	0.040	0.054	0.038	**0.037**
Standard Monitoring #16	Sample Date	11/14/07	1/10/08	3/18/08	5/14/08	7/9/08	9/10/08	
	Sample Result	0.034	0.025	0.046	0.048	0.038	0.028	**0.037**

[1] *Verify that site IDs for IDSE standard monitoring sites match the site IDs in your Standard Monitoring Plan.*

Attach additional sheets as needed for IDSE standard monitoring results.

This page intentionally left blank.