

Form 5: IDSE Report for a Modeling SSS

I. GENERAL INFORMATION

(Skip this section if you are submitting the plan and report at the same time)

A. PWS Information*

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

B. Date Submitted*

System Type:

- CWS
- NTNCWS

Source Water Type:

- Subpart H
- Ground

Buying / Selling Relationships:

- Consecutive System
- Wholesale System
- Neither

C. PWS Operations

Residual Disinfectant Type: Chlorine Chloramines Other: _____

Number of Disinfected Sources: ___ Surface ___ GWUDI ___ Ground ___ Purchased

D. Contact Person*

Name: _____

Title: _____

Phone Number: _____ Fax: _____

E-mail: _____

II. SSS AND STAGE 2 DBPR REQUIREMENTS*

A. Number of Required Stage 2 DBPR Compliance Monitoring Sites _____ TOTAL

Highest TTHM: _____ Stage 1 DBPR: _____

Highest HAA5: _____

B. IDSE Schedule

- Schedule 1
- Schedule 2
- Schedule 3
- Schedule 4

C. Stage 2 DBPR Compliance Monitoring Frequency

- Once during peak historical month
- Every 90 days (4 monitoring periods)

D. Number of Required SSS Samples

_____ TOTAL

III. MODELING INFORMATION

(Skip this section if you submitted a modeling study plan with an approved model calibration and your information has not changed, or if you are submitting your plan and report at the same time)

A. How was demand data assigned to the model? (*attach additional sheets if needed*)

1.	What method was used to assign demands throughout the system?	
2.	How did you estimate diurnal demand variation? How did you determine total system demand?	
3.	How many demand categories did you use?	
4.	How did you address large water users?	

B. Describe all calibration activities undertaken* (*attach additional sheets if needed*)

1.	When was the model last calibrated?	
2.	What types of data were used in the calibration?	
3.	When was the calibration data collected?	
4.	What field tests have been performed to collect calibration data?	

III. MODELING INFORMATION (Continued)

5. How did you determine friction factors (C-factors)?

6. Was the calibration completed for the peak month for TTHM formation? If not, was the model performance verified for the peak month for TTHM formation?

7. How well do actual tank levels correlate with predicted tank levels during the peak month for TTHM formation?

Submit a graph of predicted tank levels vs. measured tank levels for the storage facility with the highest water age in each pressure zone.*

8. If you are using a water quality model, what parameters are modeled? How was the model calibrated?

III. MODELING INFORMATION (Continued)

C. How was the SSS modeling performed?* (*attach additional sheets as needed*)

<p>1. Was modeling done for the operating conditions during the peak month for TTHM formation*?</p>	
<p>2. How were operational controls represented in the model?</p>	
<p>3. How was water age simulated during the peak month for TTHM formation (time steps, length of simulation, etc.)?</p>	
<p>4. What are the average water age results for your distribution system?</p> <p>Submit final model output showing 24-hour average residence time throughout the distribution system*.</p> <p>Submit graph of water age at the longest residence time storage facility in the distribution system showing the predictions for the entire EPS simulation period*.</p>	

IV. SSS MONITORING LOCATION SELECTION

How were the SSS monitoring locations selected? (*attach additional sheets as needed*)

1.	What model results were used as the basis for selection?	
2.	What criteria were used in selecting average residence time, high TTHM, and high HAA5 sites?	
3.	What additional data was used in the analysis, and how was it used?	
4.	How did you look at practical considerations like accessibility of sampling locations?	
5.	How did you verify that your selected sampling locations corresponded to the selected node in your model?	

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V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS*

A. TTHM Results

Site ID & Category	Data Type	TTHM (mg/L)				LRAA
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

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V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS* (Continued)

B. HAA5 Results

Site ID & Category	Data Type	HAA5 (mg/L)				LRAA
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

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V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS* (Continued)

C. Where were your TTHM and HAA5 samples analyzed?

In-House

Is your in-house laboratory certified?

Yes

No

Certified Laboratory

Name of certified laboratory: _____

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

TTHM

HAA5

EPA 502.2

EPA 552.1

EPA 552.2

EPA 524.2

EPA 552.3

SM 6251 B

EPA 551.1

VI. SELECTION OF STAGE 2 DBPR COMPLIANCE MONITORING LOCATIONS

Describe the comparison of sampling and modeling results (*attach additional sheets as needed*):

1.	How well did the sampling results correspond to the modeling results?	
2.	For samples that did not match well with model results, what follow-up investigations were performed?	
3.	Were additional samples collected? (Include data on table in Section IV)	
4.	Submit a graph of water age versus time for each selected sampling location*.	

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VII. JUSTIFICATION OF STAGE 2 DBPR COMPLIANCE MONITORING SITES*

Stage 2 Compliance Monitoring Site ID	Site Type	Justification
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	
	<input type="checkbox"/> Highest TTHM <input type="checkbox"/> Highest HAA5 <input type="checkbox"/> Stage 1 DBPR	

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

VIII. PEAK HISTORICAL MONTH

A. Peak Historical Month* _____

B. Is Your Peak Historical Month the Same as your Peak Month in Your Modeling Study Plan?

Yes No

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

IX. PROPOSED STAGE 2 COMPLIANCE MONITORING SCHEDULE*

Stage 2 Compliance Monitoring Site ID	Projected Sampling Date (date or week) ¹			
	period 1	period 2	period 3	period 4

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.

X. DISTRIBUTION SYSTEM SCHEMATIC*

*(Skip this section if you submitted a modeling study plan and your distribution system schematic **was complete** and has not changed from your approved modeling study plan, or if you are submitting the plan and report at the same time)*

ATTACH a schematic of your distribution system. If your schematic has changed or if you did not show your SSS monitoring locations on the distribution system schematic you submitted with your model study plan (Form 4), you must submit a revised distribution system schematic.

XI. ATTACHMENTS

- Tabular or spreadsheet documentation that your model meets minimum calibration requirements if updated since approved modeling study plan* (Section III).
- Additional sheets for explaining model information/results, including required graphs if not submitted as part of an approved modeling study plan* (Section III).
- Additional sheets for sampling results, if needed (Section V).
- Additional sheets for selection of Stage 2 DBPR compliance monitoring sites (Section VI).
- Graph of water age versus time for all Stage 2 DBPR sites selected* (Section VI).
- Additional sheets for justification of Stage 2 DBPR Compliance Monitoring Sites, if needed (Section VII). **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 VIII).
- Additional sheets for proposed compliance monitoring schedule (Section IX). **REQUIRED if you are a subpart H system serving more than 249,999 people.**
- Explanation of deviations from approved study plan.
- Distribution system schematic* (Section X). **REQUIRED if it has changed from your approved model study plan or if monitoring locations were not shown.**
- Compliance calculation procedures (for Stage 2 Compliance Monitoring Plan).

Total Number of Pages in Your Report: _____

Note: All items marked with an asterisk (*) are required by the rule.