



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

CHAPTER 5

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

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5.0 System Specific Study Using Existing Monitoring Results

This chapter covers:

- 5.1 Qualifying for an Existing Monitoring Results SSS
- 5.2 Preparing Your SSS Plan
 - ☞ Form 2: *Existing Monitoring Results SSS Plan*
- 5.3 Selecting Stage 2 DBPR Compliance Monitoring Sites and Preparing the IDSE Report
 - ☞ Form 3: *IDSE Report for an Existing Monitoring Results SSS*
- 5.4 Recordkeeping
- 5.5 Next Steps: Preparing the Stage 2 DBPR Compliance Monitoring Plan

This system specific study (SSS) allows systems to avoid duplicating field monitoring efforts under the Initial Distribution System Evaluation (IDSE) if they already have significant existing total trihalomethane (TTHM) and haloacetic acid-five (HAA5) data. Some systems may have operational TTHM and HAA5 data beyond what is required by the Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR) that will allow them to qualify for this IDSE option. Other small and medium systems with many plants may be able to qualify using their Stage 1 DBPR data (these systems may have more data for Stage 1 than will be required by the Stage 2 DBPR because of the change from plant-based to population-based monitoring requirements). Section 5.1 provides the minimum requirements systems must meet to qualify for the existing monitoring SSS.

If you have not already done so, you should complete the **flowchart** in Exhibit 2.3 of this guidance manual. The flowchart will help you select the most appropriate IDSE option for your system and will direct you to a 2-page **Requirements Summary Sheet** for your schedule. You will also be directed to the **System Specific Study Requirements - Attachment** sheet containing detailed requirements for Stage 2 compliance monitoring (e.g., number of samples and sampling frequency). You should keep these sheets handy as you work through this chapter.

This chapter provides guidelines for compiling results, preparing an Existing Monitoring Results SSS Plan, selecting Stage 2 DBPR compliance monitoring sites, and preparing the IDSE report. Appendix E supports this chapter by providing an example SSS plan and report for a surface water system serving 40,000 people.

It is important that **consecutive and wholesale systems** communicate with each other throughout the IDSE process. If you are a consecutive or wholesale system, refer to **Appendix D** for specific issues that you should consider.

If you plan to conduct an SSS using existing monitoring results, you must submit an SSS study plan for state or EPA review in accordance with the schedule on your requirements summary sheet found in Chapter 2. You have the option of submitting the SSS plan and IDSE

report together (which must include selection of Stage 2 DBPR compliance monitoring sites) by the study plan deadline if all monitoring is complete. If you choose this option, you have no further requirements under the IDSE unless you are contacted by EPA or your state. Alternatively, you may submit the SSS plan first, conduct additional monitoring, then submit your IDSE report for the existing monitoring results SSS by the report deadline in your requirements summary sheet. Below is a discussion of when you should use each of these two options.

Option 1: Submitting a Completed Study Plan and IDSE Report at the Same Time

You should consider Option 1 if:

- You have at least as much data as the minimum requirements.
- You believe that your existing data provides good coverage of your system and adequately identifies locations of high TTHM and HAA5.

You need to:

- Select Stage 2 DBPR compliance monitoring locations based on your existing monitoring results.
- Submit both the SSS plan and IDSE report by the deadline for the SSS plan provided on your requirements summary sheet.

Option 2: Submitting a Separate SSS Plan and IDSE Report

You should consider Option 2 if:

- You believe that Stage 1 compliance monitoring data collected during the IDSE period can help select Stage 2 compliance monitoring sites.
- You have additional operational monitoring planned that will aid you in selecting Stage 2 DBPR compliance monitoring sites.
- Your existing data does not provide good geographic coverage of your system.

You need to:

- Submit the SSS plan by the deadline provided on your requirements summary sheet.
- Conduct additional monitoring by the date listed in your requirements summary sheet.
- Select Stage 2 DBPR compliance monitoring sites based on existing and new monitoring results.
- Submit your IDSE report by the deadline in your requirements summary sheet.

5.1 Qualifying for an Existing Monitoring Results SSS

Checklist 5.1 on the next page contains the minimum requirements your system must meet to qualify for an SSS using existing monitoring results. The data you use to meet the minimum number of monitoring locations and number of samples must meet the criteria presented in the checklist. Remember, though, that EPA or your state can still require you to conduct standard monitoring even if you qualify for the existing monitoring results SSS.

The following sections provide additional guidance for evaluating your data, source water conditions, and distribution system conditions to determine if you qualify.

5.1.1 Evaluating Existing Monitoring Data

You must have collected at least the total number of TTHM and HAA5 samples as shown in Checklist 5.1. You must also have sampled from the minimum number of locations shown for your system size and source water type. Your existing monitoring results must include your Stage 1 DBPR compliance monitoring data. All of the data you use to count towards these minimum numbers must meet the criteria in the checklist. All data must have been collected within *five years prior to your SSS plan deadline* as listed on your requirements summary sheet found in Chapter 2. See Exhibit 5.1 for the five-year qualifying periods for each Stage 2 DBPR schedule.

Exhibit 5.1 Qualifying Period for the Existing Monitoring Results SSS

Schedule ¹	SSS Plan Deadline	Five-Year Qualifying Period for Existing Monitoring Results
1	October 1, 2006	October 1, 2001 - October 1, 2006
2	April 1, 2006	April 1, 2001 - April 1, 2006
3	October 1, 2007	October 1, 2002 - October 1, 2007
4	April 1, 2008	April 1, 2003 - April 1, 2008

Note:

1. Your schedule is defined by population served by your system or by the largest system in your combined distribution system. You should have received a letter from EPA or your state with your schedule for the Stage 2 DBPR. See Chapter 2 for more information.

Checklist 5.1 Minimum Requirements Checklist for an SSS Using Existing Monitoring Results

Yes No

- Do you have at least the minimum number of distribution system monitoring locations shown in the table below from which you collected TTHM and HAA5 samples?
- Do you have at least the minimum number of TTHM samples and HAA5 samples shown in the table below?
- Was each monitoring location sampled once during the peak historical month for TTHM, HAA5, or warmest water temperature for every 12 months of qualifying data submitted?
- Were all qualifying samples collected and analyzed in accordance with an approved EPA method and by a certified laboratory?
- Were all sample results collected no earlier than five years prior to your SSS plan submission deadline?
- Have your distribution system and treatment not changed significantly since you collected your samples?
- Are your existing monitoring locations representative of your entire distribution system?

*If you answered yes to **all** of the above questions, you meet EPA's minimum requirements for an SSS using existing monitoring results. Remember, though, that EPA or your state can still require you to conduct standard monitoring, even if you meet the minimum requirements, or you can choose to conduct standard monitoring.*

Source Water Type	System Size Category (Population Served)	Minimum Number of Monitoring Locations	Minimum Number of Samples	
			TTHM	HAA5
Subpart H	<500	3	3	3
	500-3,300	3	9	9
	3,301-9,999	6	36	36
	10,000-49,999	12	72	72
	50,000-249,999	24	144	144
	250,000-999,999	36	216	216
	1,000,000-4,999,999	48	288	288
	≥5,000,000	60	360	360
Ground Water	<500	3	3	3
	500-9,999	3	9	9
	10,000-99,999	12	48	48
	100,000-499,999	18	72	72
	≥500,000	24	96	96

Each location must have been sampled once during the **peak historical month for TTHM, HAA5, or warmest water temperature** for every 12 months of qualifying data. You should identify your month of high TTHM, high HAA5 or warmest water temperature by reviewing your compliance or other operational data. If you have more than one source in your system, you should base the peak historical month on the source associated with the highest TTHM or HAA5 formation.

If you have monthly or quarterly TTHM or HAA5 data, EPA recommends that you use these results to identify your peak historical month. You can also evaluate water temperature data to identify the peak historical month for each year. If the peak historical month for TTHM, HAA5, or water temperature is different in different years, you should select the month that is most reflective of your system's normal operating and climatological conditions and use that month throughout your analysis. You should document the basis for your peak historical month for TTHM, HAA5, or warmest water temperature in your SSS Plan (See Section 5.2 for guidance on preparing your SSS plan).

Your existing monitoring results for TTHM and HAA5 must have been collected and analyzed in accordance with **an approved EPA method**. See Appendix C of this manual for information on sample collection and approved methods. Your results must have been generated by a certified laboratory.

If you have several years worth of data during your five-year qualifying period, you can use different locations sampled in different years to qualify, as long as the data meet all other criteria for the SSS. Alternatively, you can qualify exclusively with data from one 12-month period, as long as the 12-month period is within five years prior to your SSS plan deadline. If you have data that spans more than 12 months, but not 24 months, the data from one peak historical month can only be used to qualify one 12-month period of data. For example, if you have collected data from January 2004 through June 2005 and August is your peak historical month, you may only use data from one 12-month period (e.g., January 2004-January 2005 or June 2004-June 2005) to count toward your minimum requirements. See Examples 5.1 and 5.2 for how hypothetical systems used their existing monitoring results to qualify for the SSS.

As you evaluate your data, keep in mind that **you are required to include all of your Stage 1 DBPR compliance monitoring data and all other operational TTHM and HAA5 data collected during the time period beginning with the first reported result and ending with the most recent Stage 1 DBPR results**. This includes data that may not meet qualifying criteria such as samples analyzed by a non-certified laboratory. You must submit this data even though it does not count toward your minimum number of locations and samples. You should verify that the qualifying data you submit meet the minimum numbers and criteria for an existing monitoring results SSS.

See Section 5.1.4 and the instructions for filling out Form 2 in Section 5.2 of this manual for suggestions for compiling your data.

Example 5.1 Qualifying With Multiple Years of Data Collected From Different Locations

A surface water system serving 9,000 people has extensive operational DBP data from their distribution system. Because they purchase water from a wholesale system serving 110,000 people, they are on Schedule 1 for the IDSE, and their SSS plan is due on October 1, 2006. The system samples quarterly at one location under the Stage 1 DBPR. Below is a description of their TTHM and HAA5 data from their system during the qualifying period (October 1, 2001 - October 1, 2006)

<i>Peak Historical Month for TTHM, HAA5 or water temperature:</i>	August, based on high TTHM and water temperature
<i>Special Monitoring Program, January 2002 through December 2003:</i>	Collected TTHM and HAA5 samples quarterly at 4 locations. Monitored during peak historical month for 2002 and 2003. Total qualifying samples = 32 TTHM 32 HAA5
<i>Special Monitoring Program, January 2004 through December 2005:</i>	Collected TTHM and HAA5 samples twice per year at 1 of the previous 4 locations plus 1 new location. Monitored during peak historical month in 2004 and 2005. Total qualifying samples = 8 TTHM 8 HAA5
<i>Stage 1 Compliance Monitoring, January 2004 through December 2005:</i>	Collected one TTHM and HAA5 sample per quarter at the Stage 1 DBPR compliance monitoring site. Monitored during peak historical month in 2004 and 2005. Total qualifying samples = 8 TTHM 8 HAA5
	Total Monitoring Locations = 6 (4+1+1) Total qualifying samples = 48 (32+8+8) TTHM 48 (32+8+8) HAA5

The system has made no significant changes to treatment or the distribution system since the data were collected. They used certified laboratories and approved methods for all data collected. This system qualifies for the SSS using existing monitoring results. They plan to submit both their SSS plan and IDSE report by their plan deadline (October 1, 2006).

Example 5.2 Qualifying Using Data from a One-Year Special Study

A subpart H water system serving 90,000 people serves a geographically diverse community. They have three springs that are ground water under the direct influence of surface water (GWUDI) and are each treated at the spring. The system currently monitors quarterly for the Stage 1 DBPR at 12 distribution system monitoring locations.

This system conducted a detailed study of TTHM and HAA5 levels in their system in calendar year 2003. They monitored quarterly at 16 different locations in their system (in addition to Stage 1 DBPR compliance monitoring locations) and collected a total of 64 TTHM and HAA5 samples. Also during 2003, the system conducted quarterly monitoring at 12 sites for Stage 1 DBPR compliance, generating a total of 48 TTHM and HAA5 results. Dual samples were taken at each site during the peak historical month of July during calendar year 2003.

Total monitoring locations = 28 (16+12)

Qualifying samples in 2003 = 112 (64+48) TTHM
= 112 HAA5

Qualifying samples in 2004 = 48 TTHM
= 48 HAA5

Qualifying samples in 2005 = 48 TTHM
= 48 HAA5

Qualifying samples in 2006 = 48 TTHM
= 48 HAA5

Total qualifying samples = 256 (112+48+48+48) TTHM
256 (112+48+48+48) HAA5

The system has made no significant changes to treatment or the distribution system since the data were collected. They used certified laboratories and approved methods for all data collected. This system qualifies for the SSS using existing monitoring results. They plan to submit both their SSS plan and IDSE report by their plan deadline (by April 1, 2007).

5.1.2 Evaluating Treatment and Source Conditions

The monitoring results used for your SSS should reflect the source water(s) and treatment configuration in place at the time that your SSS is completed. Within the period of the SSS data, temporary changes, such as regular maintenance, rehabilitation, and upgrades of plant processes are generally acceptable. Temporary changes to disinfection practices are also generally acceptable within the period of the SSS data. Regular, repeating, and seasonal changes in supply

or treatment are allowable during the SSS qualifying period and should be reflected in data submitted.

If you made permanent changes to your system that significantly affected relative DBP formation in the distribution system, ***only existing monitoring results representing conditions after the change should be used for your SSS***. Treatment changes that affected the magnitude of TTHM and HAA5 levels in the distribution system, but that are unlikely to have changed the DBP formation rate and relative levels of TTHMs and HAA5s in different parts of the system, are acceptable. For example, improved control of an existing coagulation process or minor changes in coagulation pH that reduce average levels of DBP precursors are acceptable. If treatment process or source changes have occurred and data collected prior to the change are utilized in an SSS, then the use of the data should be justified. An explanation of the change and a demonstration that the change is unlikely to have significantly affected the relative TTHM and HAA5 levels in the distribution system should be provided. See Appendix A for more information on factors affecting DBP formation.

5.1.3 Evaluating Distribution System Conditions

Your qualifying data must reflect the overall distribution system hydraulic operation and large-scale movement of water through your system at the time you submit your SSS plan or report. Normal daily and seasonal changes in system operation during the data collection period for the SSS are acceptable. Supply points, pressure zones, large transmission mains, pump stations, storage tanks, and large wholesale and retail customers should generally be consistent throughout the data collection period for the SSS and submittal of your study plan and IDSE report, but do not have to remain exactly the same. A steady increase in water demand over time that occurs in many systems due to growth is acceptable during the data collection period for the SSS, if it did not result in major changes in water flow pattern and age within the distribution system.

Exhibit 5.2 Examples of System Changes¹

Temporary Changes that do not Significantly Impact DBP Formation	Permanent Changes that are Generally Considered Cutoff Points for Using Existing Data
<ul style="list-style-type: none"> • Regular maintenance, rehabilitation, and upgrades of plant processes • Short duration switches to free chlorine for secondary disinfection: <ul style="list-style-type: none"> • to control nitrification in a chloraminated system • for short duration emergencies • for special disinfection operations 	<ul style="list-style-type: none"> • Adding booster chlorination in the distribution system • Addition of a new water source • Addition or removal of a very high water use customer (industrial, institutional, or wholesale) • Addition, deletion, or replacement of mains or storage tanks that significantly change water flow patterns • Large main looping projects that significantly change water flow patterns

¹ Note that this list is not comprehensive—you should use best professional judgement to determine if a modification to your treatment or distribution system should be considered a cutoff point for the use of existing monitoring results.

Significant distribution system changes that should be considered as cutoff points for the use of existing monitoring results include:

- Major, permanent changes in plant production rates, installation or removal of high service or booster pump stations, or pump operation schemes that significantly change the location of influence zones of treatment plants and mixing zones within the distribution system.
- Major, permanent changes in water use patterns or system hydraulics.

Specific examples of these types of changes are shown in Exhibit 5.2.

This list is not comprehensive—you should use best professional judgement to determine if a modification to your distribution system should be considered a cutoff point for the use of existing monitoring results.

5.1.4 Compiling Your Data and Calculating LRAAs

You must include *all* of your existing TTHM and HAA5 data (Stage 1 compliance and operational data) from the first monitoring date that you included through the most recent Stage 1 DBPR compliance monitoring results in your SSS plan and certify that you have not omitted any data. The Stage 2 DBPR requires all data to be submitted to confirm that there were no significant or permanent changes to source water quality (swings or shifts) during the monitoring period that might affect the selection of appropriate Stage 2 compliance monitoring sites.

To organize your data for submission, compile your data into a table or spreadsheet format. You may wish to use the tables in the SSS plan form in this chapter. You should note which location IDs are Stage 1 compliance locations. If your locations were monitored at different time intervals (e.g., twice / year vs. quarterly), consider organizing your data such that data from your peak historical month lines up vertically.

You should select a repeating 12-month period for your data analysis, and calculate the annual average at each monitoring site for that time period for every 12-month period of qualifying data submitted. See the instructions for filling out Form 2 in Section 5.2 for more suggestions on how to organize your data.

5.2 Preparing Your Existing Monitoring Results SSS Plan

Every system that conducts an SSS using existing monitoring results **must** prepare and submit an SSS study plan. You should submit the plan to the Information Processing and Management Center (IPMC) for review by EPA or your state. See Section 1.4 of this guidance manual for information on how to submit your plan to the IPMC.

EPA has developed an **Existing Monitoring Results SSS Form (Form 2)**, presented in this section and available electronically as part of the **IDSE Tool**. You are not required to use this form; however, if you choose not to use it, refer to Exhibit 5.3 for a list of the minimum elements you must include in your SSS study plan.

The IDSE Tool creates a custom form for your system and provides links to technical guidance from this manual. The tool is available on EPA's website at <http://www.epa.gov/safewater/disinfection/stage2>.



Your deadline for submitting your study plan can be found on your requirements summary sheet in Chapter 2. If EPA or your state does not approve or request modifications to your plan, or notify you that your plan is still under review **within 12 months** after the deadline for plan submission, **you may consider the plan approved**.

Exhibit 5.3 Required Elements of Your SSS Plan

- The population served by your system.
- Your system type (subpart H or ground water).
- All stage 1 DBPR monitoring results and other monitoring results generated during the time period beginning with the first reported result and ending with the most recent Stage 1 DBPR compliance results.
- Certification that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent Stage 1 result.
- Certification that the samples were representative of the entire distribution system and that the treatment and distribution system have not changed significantly since the samples were collected.
- A distribution system schematic showing entry points, sources, storage facilities, and locations and dates of all completed and planned (if applicable) compliance and non-compliance monitoring.
- Identification of your peak historical month for TTHM, HAA5 or warmest water temperature.

The Existing Monitoring Results SSS Plan Form (Form 2) includes the following sections:

- I. General Information
- II. SSS Requirements
- III. Peak Historical Month
- IV. Previously Collected Monitoring Results
- V. Certification of Data
- VI. Proposed SSS Monitoring Dates
- VII. Distribution System Schematic
- VIII. Attachments

Sections of the form with an asterisk (*) are required by the Stage 2 DBPR. An example of a completed form is provided in Appendix E of this guidance manual.

I. General Information

- I.A. PWS Information* - Important definitions for classifying your system are provided in the **definitions section** at the beginning of this guidance manual. If you have any questions on this section, contact EPA or your state.

PWSID - Enter your PWSID identification number here. This number is typically assigned by your state.

PWS Name - Enter the name of your system here.

PWS Address - Enter the primary mailing address for your water system here.

Population Served - Enter the number of people served by your PWS. Remember, this is your RETAIL population served, not including the population served by consecutive systems that purchase water from you.

System Type - Put a check mark in the appropriate box to identify whether your system is a CWS or a NTNCWS. Definitions for CWS and NTNCWS can be found in the **definitions section** at the beginning of this guidance manual.

Source Water Type - Put a check mark in the appropriate box to identify whether your system is a subpart H system or a ground water system. If you use any surface water or GWUDI as a source, mark the subpart H box. Definitions for subpart H system (including GWUDI) and ground water system can be found in the **definitions section** at the beginning of this guidance manual.

Buying/Selling Relationships - Put a check mark in the appropriate box to identify whether your system is a consecutive system, a wholesale system, or neither. If you are both a consecutive and wholesale system (e.g., you buy and sell water), check both boxes. Definitions for consecutive system and wholesale system can be found in the **definitions section** at the beginning of this guidance manual and in **Appendix D**.

I.B. Date Submitted* - Enter either the date that you are submitting the form electronically, putting it in the mailbox, or dropping it off with an express delivery service. Be sure to submit your SSS study plan before the deadline found on your requirements summary sheet.

I.C. PWS Operations - This section asks questions about your system to help inform EPA and state personnel during the plan review process.

Residual Disinfectant Type - Put a check mark in the appropriate box to identify the type of disinfectant you most often use **to maintain a residual in your distribution system** (not necessarily the same disinfectant used for primary disinfection at the treatment plant). If you use chloramine but switch to free chlorine for a short time, you should still check chloramine only. If you use chloramine and chlorine regularly in your system (e.g., 4 months of free chlorine and 8 months of chloramines), check both chlorine and chloramine. If you maintain your residual with a disinfectant other than chlorine or chloramines (e.g.,

chlorine dioxide), you should place a check next to the box marked “Other” and enter the type of disinfectant you use in the blank next to “Other”.

Number of Disinfected Sources - Enter the total number of sources that deliver disinfected water to your distribution system. If you connect to a single wholesale system at a number of locations in your distribution system, consider this one purchased source. Multiple wells that are disinfected at a common treatment plant should also be considered one source. Do not count wells that are not disinfected or are disinfected by UV only.

I.D. Contact Person* - Enter the contact information of the person who is submitting the form. This should be the person who will be available to answer questions from EPA and/or the state reviewers.

II. SSS Requirements*

II.A. Minimum Number of Monitoring Locations - Refer to the *System Specific Study Requirements - Attachment* sheet in Chapter 2. Copy the numbers from the “SSS Existing Data - Minimum Sample Requirements” table for the number of monitoring locations that corresponds to your source type and the population served by your system.

II.B. Minimum Number of Required Samples - Refer to the *System Specific Study Requirements - Attachment* sheet in Chapter 2. Copy the numbers from the “SSS Existing Data - Minimum Sample Requirements” table for the number of TTHM and HAA5 samples that corresponds to your source type and the population served by your system.

II.C. IDSE Schedule - Enter the schedule for your system based on the **letter** sent to you from EPA or your state. See Chapter 2 for more information on the letter.

III. Peak Historical Month

III.A. Peak Historical Month for TTHM, HAA5 or Warmest Water Temperature* - Enter the month that you determined to be your peak historical month for TTHM, HAA5 or warmest water temperature for your existing monitoring results.

III.B. If Multiple Sources, Source Used to Determine Peak Historical Month - If your system has only one source, write “N/A” here. If you have more than one source, write the name of the source you used as the basis for determining peak historical month. For example, if a system has one surface water, one ground water, and one purchased ground water source, it is likely that they relied heavily on data from the surface water source to select their peak historical month. This system would write “surface water source” in the blank provided.

III.C. Peak Historical Month Based On - Put a check mark in the appropriate box to identify whether your system used TTHM, HAA5, or warmest water temperature to determine the peak historical month. If more than one were used, check as many as necessary. If you used data other than TTHM, HAA5 and temperature data to select your peak historical month (e.g., you used TOC data and/or water age data), describe how you used additional data here.

IV. **Previously Collected Monitoring Results***

IV.A. Where were your TTHM and HAA5 samples analyzed? - Put a check mark in the appropriate box to identify whether your system analyzed TTHM and HAA5 samples in an in-house laboratory or sent the samples to a certified laboratory for analysis.

If you analyzed your TTHM and HAA5 samples in an in-house laboratory, check the appropriate box to identify whether your laboratory is certified. If you sent your TTHM and HAA5 samples to a certified laboratory, enter the name of the laboratory in the blank. If you used more than one laboratory (e.g., if you used different laboratories for operational and compliance samples), list both laboratories, or check “in-house” and list the name of the laboratory if applicable.

IV.B. What method was used to analyze your TTHM and HAA5 samples? Put a check mark in the appropriate box to indicate the analytical method used to measure TTHM and HAA5. If more than one method was used (e.g., if you used different methods for operational and compliance samples), check more than one method. If you do not know what method was used, contact your laboratory.

IV.C. TTHM Results - Enter the TTHM results for each monitoring site for each monitoring period in which you collected data. Attach additional copies of this page if needed. Alternatively, you can use your own format and submit all monitoring results in an attachment. Guidelines for using the data tables in this section of Form 2 to report results are provided below.

- **If you have multiple years of data at a monitoring location:** Select a repeating 12-month period for your data analysis. You may choose the calendar year, fiscal year, or other 12-month period. While you can select any 12-month period, you must include one sample for the peak historical month for every 12 months of qualifying data submitted. List each 12-month period in a separate row and indicate the 12-month period during which the data were collected. List multiple years of data for each monitoring location before continuing to the next monitoring location.

- **If you have data from one 12-month period at a monitoring location:**
Use the 12-month period for which you have collected data, even if you used a different time period for other monitoring locations.

Enter the site ID for each location, and note which site IDs are Stage 1 compliance locations. If your locations were monitored at different time intervals (e.g., twice/year vs. quarterly), consider organizing your data such that data from your peak historical month lines up vertically. For each sample result, enter the date on which sampling was conducted.

In the column marked “Data Qualifies (yes/no),” indicate whether the data in the row are qualifying data. To be considered qualifying data, the samples must be analyzed by a certified laboratory using an approved method, and each location must be sampled during the peak historical month identified in III.A for each 12-month period of data submitted. See Section 5.1.1 for more information.

Calculate the LRAA for each 12-month period of qualifying data submitted and enter it in the last column in the table. If you did not monitor on a regular basis, compute quarterly averages first, then use these values to calculate your LRAA. If you took a sample once during the peak historical month, then your LRAA is the single result from your peak historical month.

Appendix E provides an example of how you can present your data.

Remember, you **must** include all Stage 1 DBPR compliance results and operational results generated during the time period beginning with the first result reported for the SSS and ending with the most recent Stage 1 DBPR results.

- IV.D. HAA5 Results - Enter the HAA5 results for each monitoring site for each monitoring period in which you collected data. For each sample result, enter the date on which sampling was conducted. Attach additional copies of this page if needed. Alternatively, you can use your own format and submit all monitoring results in an attachment.

Use the same 12-month periods you used to report TTHM data under IV.C. Refer to IV.C. for suggestions on how to organize and report your data.

Remember, you **must** include all Stage 1 DBPR compliance results and operational results generated during the time period beginning with the first result reported for the SSS and ending with the most recent Stage 1 DBPR results.

- V. **Certification of Data*** - Carefully read the criteria listed in this section and review your system data to verify that each statement is true. If all statements are true, sign your name and enter the date in the spaces provided.

VI. Proposed SSS Monitoring Schedule* - Skip this section if you are submitting your IDSE report at the same time as your SSS plan. Complete it only if you plan to conduct monitoring during the SSS period.

Enter the ID for each monitoring site in the table (verify that these match the IDs you enter on your schematic), and enter your proposed sampling schedule. The entry can be a specific date or week and can be in a number of different formats. For example:

- 7/9/07
- 2nd week in Nov '07
- Week of 7/9/07

Be sure to include dates for Stage 1 DBPR monitoring to be conducted during the SSS period. Remember that at least one monitoring period must be during the peak historical month identified in Section III.A. for each 12 months of qualifying data. Attach additional sheets as needed.

VII. Distribution System Schematic* - Attach a distribution system schematic to your SSS plan. Your schematic must include the locations of entry points, sources, storage facilities, Stage 1 compliance monitoring sites, and monitoring sites for your existing results.

SSS plans will not be considered confidential business information (CBI) and are subject to the Freedom of Information Act (FOIA). *Therefore, your distribution system schematic should not contain information that poses a security risk to your system.* EPA suggests that you consider one of the following options for submitting distribution system schematics:

- **Option 1: Distribution system schematic with no landmarks or addresses indicated.** Show locations of sources, entry points, storage facilities, Stage 1 compliance monitoring locations, and monitoring sites for your existing results (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, Stage 1 compliance monitoring locations, and monitoring sites for your existing results (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

Schematics should be as clear and easy to read as possible. They should typically be submitted on a scale of between 1:4,000 and 1:8,000; however, larger-scale drawings are acceptable as long as systems components can still be clearly shown. All sizes from 8½ inches x 11 inches to larger, plan-sized sheets are acceptable. If electronic versions are submitted, use one of the following file types:

- Adobe PDF file (*.pdf)
- Microsoft Word (*.doc)
- WordPerfect (*.wpd)
- Image file (*.gif, *.bmp, *.jpg, *.jpeg)

VIII. Attachments - Put a check mark in each of the boxes corresponding to any attachments that you have included in your report. A distribution system schematic is required. Refer to Section VII for details.

If you submit your study plan electronically, you also have the option to submit attachments in hard copy. Include a note in your electronic study plan explaining that attachments are being submitted in hard copy, and mail the hard copy to the IPMC mailing address in your Requirements Summary Sheet. The IPMC will match the hard copy submission with your electronic submission when it is received.

Enter the total number of pages in your monitoring plan (including attachments) in the blank at the bottom of this section. This will allow EPA or your state to ensure that all pages were received.

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Form 2: Existing Monitoring Results SSS Plan Page 1 of 8

I. GENERAL INFORMATION

A. PWS Information*

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

B. Date Submitted*

System Type: <input type="checkbox"/> CWS <input type="checkbox"/> NTNCWS	Source Water Type: <input type="checkbox"/> Subpart H <input type="checkbox"/> Ground	Buying / Selling Relationships: <input type="checkbox"/> Consecutive System <input type="checkbox"/> Wholesale System <input type="checkbox"/> Neither
--	--	--

C. PWS Operations

Residual Disinfectant Type: Chlorine Chloramines Other _____

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

D. Contact Person*

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. SSS REQUIREMENTS*

A. Minimum Number of Monitoring Locations _____

B. Minimum Number of Required Samples

_____ TTHM

_____ HAA5

C. IDSE Schedule

Schedule 1 Schedule 2 Schedule 3 Schedule 4

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

C. TTHM Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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							

¹ Verify that site IDs match the site IDs on your distribution system schematic.

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

C. TTHM Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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							

¹ Verify that site IDs match the site IDs on your distribution system schematic.

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

D. HAA5 Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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						

¹ Verify that site IDs match the site IDs on your distribution system schematic.

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

D. HAA5 Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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							

¹ Verify that site IDs match the site IDs on your distribution system schematic.

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan Page 7 of 8

V. CERTIFICATION OF DATA*

I hereby certify that:

- The reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent Stage 1 DBPR results.
- The samples are representative of the entire distribution system.
- Treatment and the distribution system have not changed significantly since the samples were collected.

Signature: _____

Date: _____

VI. PROPOSED SSS MONITORING SCHEDULE*

Skip if you are submitting your IDSE Report at the same time as your plan

SSS Site ID (from map) ¹	Projected Sampling Date (date or week) ²					
	period 1	period 2	period 3	period 4	period 5	period 6

¹ Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies of this sheet if necessary.

² period = monitoring period. Can list exact date or week (e.g., week of 7/9/07)

Form 2: Existing Monitoring Results SSS Plan Page 8 of 8

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, operational 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, operational 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.

VIII. ATTACHMENTS

- Additional sheets for explaining how you selected the peak historical month (Section III).
- Additional sheets for previously collected monitoring results (Section IV).
- Additional sheets for proposed monitoring dates (Section VI).
- Distribution system schematic* (Section VII).

Total Number of Pages in Your Plan: _____

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

5.3 Selecting Stage 2 DBPR Compliance Monitoring Sites and Preparing the IDSE Report

If you submitted your study plan separate from your IDSE report, EPA or your state will review the plan. If EPA or your state does not approve or request modifications to your plan, or notify you that your plan is still under review **within 12 months** after the deadline for plan submission, **you may consider the plan approved**. Follow your approved study plan as you complete SSS monitoring.

Every system that conducts an existing monitoring results SSS **must** use results from their SSS to select Stage 2 DBPR compliance monitoring sites. You must follow a **specific protocol**, as laid out in the Stage 2 DBPR, to evaluate data and select compliance sites unless you decide to recommend alternative Stage 2 compliance monitoring sites to your state or EPA. This section presents the required protocol for selecting Stage 2 DBPR compliance monitoring sites and provides guidance for preparing an IDSE report.

You **must** include all additional monitoring results taken during the period of the SSS and recommended Stage 2 compliance monitoring sites in your IDSE Report. You should submit your IDSE report to the Information Processing and Management Center (IPMC) for review by EPA or your state. See Section 1.4 of this guidance manual for information on how to submit your plan to the IPMC.

You must submit the report by the deadline in your requirements summary sheet identified in chapter 2. As discussed on page 5-2 of this chapter, you have the option of submitting your IDSE report with the SSS plan by the plan deadline. In this case, all monitoring results must be included in your study plan.

EPA has developed a form for the **IDSE Report for an Existing Monitoring Results SSS (Form 3)**, presented in Section 5.3.3 and available electronically as part of the **IDSE Tool**. You are not required to use this form; however, if you choose not to use it, refer to Exhibit 5.4 for a list of the minimum elements you must include in your IDSE report. An example of a completed report can be found in Appendix E. The IDSE Tool is available on EPA's website at <http://www.epa.gov/safewater/disinfection/stage2>.



IDSE Tool

Exhibit 5.4 Required Elements of Your IDSE Report for an Existing Monitoring Results SSS

- All additional Stage 1 DBPR monitoring results and other monitoring results generated during the time period of the SSS in tabular or spreadsheet format.
- Recommendations and justifications of Stage 2 DBPR monitoring sites and sampling dates.
- If changed from your approved study plan,
 - Distribution system schematic
 - Population
 - System type (subpart H or ground water).
- An explanation of any deviations from your approved study plan

5.3.1 Selecting Stage 2 DBPR Compliance Monitoring Locations

Section 5.1.4 provided guidance on compiling data for each Stage 1 compliance site and each operational site. These results should have been included in your SSS plan. Calculate the LRAAs for all sites that were monitored since you submitted your SSS plan, including your Stage 1 monitoring sites. If you are submitting your IDSE report at the same time as your SSS plan, you do not need to make additional calculations.

You will be starting with the LRAA results for each monitoring location to select Stage 2 compliance monitoring sites. If you have multiple years of data at the same monitoring location, use the year of data with the highest LRAA for each site. If you monitored at different frequencies at different locations or in different years, consider using your peak historical month data to evaluate your monitoring locations. If you do this, ensure your analysis and resulting recommendation is clear in your justification for each monitoring location. EPA recommends that you use **Worksheet 5.1** to organize your data and select Stage 2 DBPR compliance monitoring sites.

As noted in the worksheet, you must use the **site selection protocol in Exhibit 5.5** to select your Stage 2 compliance monitoring locations. The number of required Stage 2 compliance monitoring sites for your system can be found on page 2 of the **System Specific Study Requirements - Attachment** sheet in Chapter 2. Use qualifying data only as you work through the protocol. If you complete all steps in the protocol and need additional compliance monitoring sites for the Stage 2 DBPR, repeat the protocol until the required number of sites has been selected. If you arrive at Step 3 or Step 7 and have no more Stage 1 DBPR sites from which to select, continue to the next step. Example 5.3 shows how a system uses the protocol to select their Stage 2 compliance monitoring sites.

Additional Factors to Consider During Selection of Stage 2 Compliance Monitoring Sites

You may select alternate sites other than those identified using the protocol, but you **must justify** the alternate locations in your IDSE report.

In general, TTHM and HAA5 LRAAs are the most important factors in site selection. However, the Stage 2 rule allows for some flexibility in this process. As you work through the site selection protocol, you should consider other factors that may lead you to select a site with a similar or slightly lower LRAA. If you do not use your highest TTHM and HAA5 LRAAs to select your Stage 2 compliance monitoring sites, you **must** provide justification for your selection in your IDSE report. The following conditions are possible reasons why you may select a site with a slightly lower LRAA over another site:

- The site provides more complete geographic coverage of the entire distribution system
- The site allows you to maintain a historical record
- Sampling at that site provides the opportunity to collect other water quality or operational data (e.g., chloramine systems may want to collect nitrate or nitrite data at that site)

EPA recognizes that a slight difference between LRAAs measured at two sites may not be meaningful given the normal variability that may occur at a site over time. As a result, the selection of a Stage 2 compliance monitoring site with a slightly lower LRAA may be acceptable if other factors, such as those listed above, favor the site with the lower LRAA. Examples 5.4 and 5.5 illustrate situations in which hypothetical systems might select Stage 2 DBPR compliance monitoring sites using criteria other than the site selection protocol. When two sites have the same LRAA, you should also consider the factors listed above to select the best site for your Stage 2 compliance monitoring.

You may want to discuss additional site characteristics that make the location suitable for Stage 2 compliance monitoring. Some characteristics you might consider including in your justifications are as follows:

- Peak historical month data
- Pipe size, or range of pipe sizes in the area
- Relationship to storage facilities
- Estimated water age, if available
- Source of water (if the distribution system is served by more than one source)

It is possible that EPA or your state may not concur with your justification and may require you to select different Stage 2 compliance monitoring sites.

**Exhibit 5.5 Protocol for Selecting Stage 2 DBPR (Subpart V)
Compliance Monitoring Sites**

Steps¹ [required by rule]		Stage 2 Compliance Monitoring Sites Selected²
1	Select the location with the highest TTHM LRAA	1 st highest TTHM site
2	Select the remaining location with the highest HAA5 LRAA	1 st highest HAA5 site
3	<p><u>For subpart H systems:</u> Select the remaining existing Stage 1 DBPR average residence time compliance monitoring location with the highest HAA5 LRAA</p> <p><u>For ground water systems:</u> Select the remaining existing Stage 1 DBPR maximum residence time compliance monitoring location with the highest HAA5 LRAA</p> <p><i>Skip this step if you have no more Stage 1 DBPR sites</i></p>	1 st Stage 1 DBPR site
4	Select the remaining location with the next highest TTHM LRAA.	2 nd highest TTHM site
5	Select the remaining location with the next highest TTHM LRAA	3 rd highest TTHM site
6	Select the remaining location with the next highest HAA5 LRAA	2 nd highest HAA5 site
7	<p><u>For subpart H systems:</u> Select the remaining existing Stage 1 DBPR average residence time compliance monitoring location with the highest TTHM LRAA</p> <p><u>For ground water systems:</u> Select the remaining existing Stage 1 DBPR maximum residence time compliance monitoring location with the highest TTHM LRAA</p> <p><i>Skip this step if you have no more Stage 1 DBPR</i></p>	2 nd Stage 1 DBPR site
8	Select the remaining location with the next highest HAA5 LRAA	3 rd highest HAA5 site
<p><i>If you need more Stage 2 DBPR compliance monitoring locations, Go back to Step 1 of this protocol and repeat the steps until you have selected the required number of total sites.</i></p>		

1. All steps are based on your calculated LRAAs for your operational sites and Stage 1 DBPR compliance monitoring sites. This means that your existing Stage 1 DBPR sites can be selected in steps *other than* 3 or 7. Stop when you reach your required number of Stage 2 DBPR compliance monitoring sites.
2. You cannot select the same site as a highest TTHM and a highest HAA5 compliance monitoring site.

Example 5.3 Selecting Stage 2 DBPR Compliance Monitoring Sites

A consecutive system serving 15,000 people has completed an existing monitoring results SSS for the IDSE. This system purchases disinfected ground water from a number of ground water systems drawing from the same aquifer. Based on state determination, the system has two Stage 1 DBPR compliance monitoring sites. According to the *System Specific Study - Attachment* sheet in Chapter 2, the system must select the following **four** Stage 2 compliance monitoring sites from operational monitoring and Stage 1 DBPR sites:

- 2 highest TTHM sites,
- 1 highest HAA5 site, and
- 1 maximum residence time site from the existing Stage 1 DBPR data.

The table below lists the maximum TTHM and HAA5 LRAAs for the Stage 1 DBPR compliance monitoring sites and operational monitoring data submitted for the existing monitoring results SSS.

Site Number and Description	Maximum TTHM LRAA (mg/L)	Maximum HAA5 LRAA (mg/L)
Stage 1 DBPR Compliance Monitoring Results:		
1	0.058	0.031
2	0.052	0.046
Operational Monitoring Results:		
3	0.053	0.040
4	0.056	0.032
5	0.051	0.042
6	0.047	0.038
7	0.045	0.036
8	0.049	0.039
9	0.038	0.034
10	0.035	0.026
11	0.021	0.015
12	0.022	0.019

Example 5.3 Selecting Stage 2 DBPR Compliance Monitoring Sites (cont.)

The water system used the site selection protocol in Exhibit 5.5 to select their compliance monitoring sites.

Go to Step 1: Select the Highest TTHM LRAA Site

Site 1 has the highest TTHM LRAA and is selected as the first high TTHM site.

Go to Step 2: Select the Highest HAA5 LRAA Site

Site 2 has the highest HAA5 LRAA and has not already been selected. Therefore, **Site 2** is chosen as the first high HAA5 site.

Go to Step 3: Select the Stage 1 Maximum Residence Time Site with the Highest HAA5 LRAA

There are no remaining Stage 1 sites to select from. **Skip this step and go to Step 4.**

Go to Step 4: Select the Next Highest TTHM LRAA Site

Site 4 has the next highest TTHM LRAA and is therefore chosen as the next highest TTHM site.

Go to Step 5: Select the Next Highest TTHM LRAA Site

Site 3 has the next highest TTHM LRAA and is therefore chosen as the next highest TTHM site.

Final Inventory of Stage 2 DBPR Compliance Monitoring Sites*

Highest TTHM: Site 1, Site 3, Site 4 (3 sites)

Highest HAA5: Site 2 (1 site)

Existing Stage 1 DBPR Site (as described in Step 3): No sites

TOTAL Sites = 4

**Note that the requirements on the previous page are for 2 highest TTHM sites, 1 highest HAA5 site, and 1 maximum residence time site from existing Stage 1 DBPR data. However, because the two Stage 1 DBPR sample sites were the highest TTHM site and the highest HAA5 site, these sites were selected during the first two steps of the selection protocol. As a result, there were no remaining Stage 1 DBPR sites to choose from during Step 3. Step 3 was skipped and the remaining two Stage 2 compliance sites were chosen using Steps 4 and 5. Based on the data collected, the system seems to have chosen its Stage 1 DBPR sites well in terms of sampling at locations with the highest TTHM and HAA5 levels.*

Example 5.4 Maintaining a Historical Record

A ground water system serves 90,000 people and must select four Stage 2 compliance sites. The system has already selected one highest TTHM site, one highest HAA5 site, and one Stage 1 maximum residence time site with the highest HAA5 LRAA. The fourth site to be selected is a high TTHM site which must be selected from the Stage 1 DBPR sites and operational sites not yet selected. The table below lists three remaining high-TTHM sites

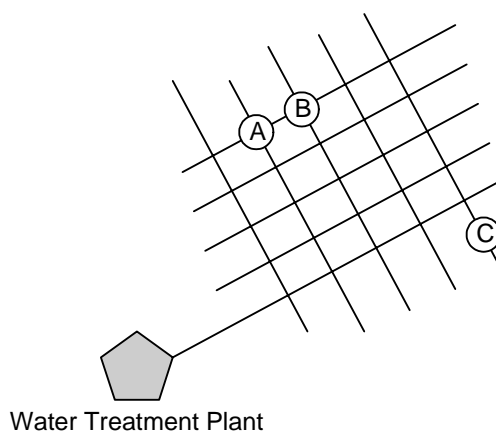
Site Number and Description	LRAA	
	TTHM (mg/L)	HAA5 (mg/L)
4 (operational site)	0.072	0.051
8 (operational site)	0.065	0.056
9 (Stage 1 DBPR max residence time site)	0.070	0.051

Among the three remaining high sites, Site 4 has the highest TTHM LRAA. However, the Stage 1 DBPR site has only slightly lower TTHM LRAA than operational Site 4. The system chooses **the Stage 1 DBPR site over site 4** for the Stage 2 high TTHM site to maintain the historical DBP record at that site.

Example 5.5 Providing Geographic Coverage When Choosing Stage 2 Sites

In general, two representative high TTHM sites should not be located in the same general area of the distribution system. Consider the following example:

The two highest TTHM LRAAs in the distribution system are from adjacent historical sample sites (sites A and B). The site with the third highest TTHM LRAA is on the far side of the distribution system (site C). In this case, consider selecting sites **A and C** or **B and C** as Stage 2 sites for a broader geographical coverage of the distribution system.



5.3.2 Determining Your Stage 2 DBPR Compliance Monitoring Dates

The first step in selecting your Stage 2 DBPR compliance monitoring dates is to select the peak historical month. According to the Stage 2 DBPR, you must conduct Stage 2 DBPR compliance monitoring during the peak historical month for TTHM or HAA5. You should use the peak historical month selected in your SSS plan unless new data suggest another month. If your high TTHM and high HAA5 data occur in different months, you should consider which contaminant is of more concern. If one contaminant clearly shows a higher overall trend and is closer to the MCL, you should choose the month in which that contaminant is highest.

You **must** conduct Stage 2 DBPR compliance monitoring during the peak historical month. If you are a ground water system that serves more than 9,999 people or you are a surface water system that serves more than 499 people, you must also conduct Stage 2 compliance sampling at 90 day intervals before and/or after the peak historical month.

The intent of the required time interval is to ensure that samples are representative of the quality of water over an extended period and do not over-emphasize either high or low concentrations of TTHM or HAA5 that might occur seasonally. For example, a system on quarterly monitoring could sample in the **third full week of every third month**. It is not necessary to sample all sites on the same day.

5.3.3 Preparing the IDSE Report

Every system that conducts an SSS for Existing Monitoring **must** prepare and submit an IDSE Report for an Existing Monitoring Results SSS. You should submit the report to the Information Processing and Management Center (IPMC) for review by EPA or your state. See Section 1.4 of this guidance manual for information on how to submit your report to the IPMC.

EPA has developed a form for the **IDSE Report for an Existing Monitoring SSS (Form 3)**, presented in this section and available electronically as part of the **IDSE Tool**. You are not required to use this form; however, if you choose not to use it, refer to Exhibit 5.4 for a list of the minimum elements you must include in your IDSE report.

The IDSE Tool creates a custom form for your system and provides links to technical guidance from this manual. The tool is available on EPA's website at <http://www.epa.gov/safewater/disinfection/stage2>.



Before you begin Stage 2 DBPR compliance monitoring, you will also be required to prepare a Stage 2 DBPR compliance monitoring plan. In addition, if you are a subpart H system serving >3,300 people, you must submit a copy of your Stage 2 compliance monitoring plan to the state. If you include **compliance calculation procedures** in your IDSE report, the report can

meet the requirement of the plan, and you do not have to prepare or submit a separate plan. As a guide for specifying your compliance calculation procedures, refer to the Stage 1 DBPR, 141.133(b), and your Stage 1 compliance monitoring plan. Check with your state, as they may have different requirements under the Stage 2 DBPR. If you are a consecutive or wholesale system, your state may choose to use its special primacy authority to modify your Stage 2 compliance monitoring requirements. In this case, you should check with the state to see if they are going to use this authority. You should develop your IDSE report for the total number of required Stage 2 compliance locations for your system.

The IDSE report for an Existing Monitoring Results SSS form includes the following sections:

- I. General Information
- II. Stage 2 DBPR Requirements**
- III. Additional SSS and Stage 1 Compliance Monitoring Results
- IV. Justification of Stage 2 DBPR Compliance Monitoring Sites**
- V. Peak Historical Month**
- VI. Proposed Stage 2 Compliance Monitoring Schedule**
- VII. Distribution System Schematic
- VIII. Attachments

If you are submitting an SSS plan and IDSE report at the same time, you must submit the portions listed in bold above. The rest of this section provides guidance on the completion of this form.

I. General Information

- I.A. PWS Information* - If nothing has changed since you completed your modeling study plan, copy information from your plan into this section. If your system characteristics have changed, see Section 5.2 of this chapter for guidance on completing this section.
- I.B. Date Submitted* - Enter either the date that you are submitting the form electronically, putting it in the mailbox, or dropping it off with an express delivery service. Be sure to submit your IDSE report before the deadline found on your requirements summary sheet.
- I.C. PWS Operations - This section asks questions about your system to help inform EPA and state personnel during the plan review process. If nothing has changed since you completed your modeling study, copy information from your plan into this section. If your system characteristics have changed, see Section 5.2 of this chapter for guidance on completing this section.

- I.D. Contact Person* - Enter the contact information of the person who is submitting the report. This should be the person who will be available to answer questions from EPA and/or the state reviewers.

II. Stage 2 DBPR Requirements*

- II.A. Number of Required Stage 2 DBPR Compliance Monitoring Sites - Refer to the *System Specific Study Requirements - Attachment* in Chapter 2. Copy the numbers from the “Stage 2 Compliance Monitoring Requirements” table that correspond to your source type and the population served by your system.
- II.B. IDSE Schedule -This should be the same schedule you entered for your modeling study plan. See Section 5.2 of this chapter for guidance.
- II.C. Required Stage 2 DBPR Compliance Monitoring Frequency - Refer to the *System-Specific Study Requirements - Attachment* in Chapter 2. Locate the monitoring frequency from the “Stage 2 Compliance Monitoring Requirements” table that corresponds to your source type and the population served by your system. Put a check mark in the box corresponding to that monitoring frequency.

III. Additional SSS and Stage 1 Compliance Monitoring Results*

Skip this section if you are submitting your IDSE Report at the same time as your SSS plan. If you are submitting additional data with your IDSE report, complete this section. See the instructions for Form 2 part IV in Section 5.2 of this guidance manual..

IV. Justification of Stage 2 DBPR Compliance Monitoring Sites*

Enter the site ID from the distribution schematic and the site type (whether it is highest TTHM, highest HAA5, Stage 1 DBPR, or a site selected using criteria other than the site selection protocol). An example of how you might justify a site is given below. For example:

2nd Highest TTHM Site

An example of how you might justify a site that was *not* selected using the protocol is below:

Among the three remaining high TTHM sites, operational Site 4 has the highest TTHM LRAA. However, Stage 1 DBPR Site 7 has only a slightly lower TTHM LRAA than operational Site 4. Therefore, we choose Stage 1 DBPR Site 7 over operational site 4 to maintain the historical DBP record.

Note that there is only space for 8 monitoring sites on this sheet. If you are a subpart H system serving more than 249,999 people you are required to monitor at more than 8 sites. Therefore, you will need to attach additional sheets.

V. Peak Historical Month

V.A. Peak Historical Month* - Enter the month that you determined to be your peak historical month for TTHM or HAA5.

V.B. Is Your Peak Historical Month the Same as in Your System Specific Study Plan?
- Put a check mark in the appropriate box to identify whether your system used the same peak historical month as in your SSS plan. If you selected a new peak historical month based on additional monitoring or other data, explain the basis for your selection here.

VI. Proposed Stage 2 DBPR Compliance Monitoring Schedule*

Enter the ID for each Stage 2 DBPR compliance monitoring site in the table (verify that these match the IDs you enter in Section IV and on your schematic). Enter your proposed sampling schedule for the number of monitoring periods identified in Section II.C. The entry can be a specific date or week and can be in a number of different formats. For example:

- 7/9/07
- 2nd week in Nov '07
- Week of 7/9/07

Remember that at least one monitoring period must be during the peak historical month identified in Section V.A. Note that there is only space for 8 monitoring sites on this sheet. If you are a subpart H system serving more than 249,999 people you are required to monitor at more than 8 sites. Therefore, you will need to attach additional sheets.

VII. Distribution System Schematic*

If you are submitting an IDSE report at the same time as your SSS plan, skip this section.

A distribution system schematic is required *only if it has changed from your SSS plan*. If it has changed, you must attach a distribution system schematic. See Section 5.2 of this manual for guidance.

VIII. Attachments - Put a check mark in each of the boxes corresponding to any attachments that you have included in your report.

Note that there is only space for 8 Stage 2 DBPR compliance monitoring sites and monitoring schedule in Sections IV and VI. If you are a subpart H system serving more than 249,999 people, you are required to monitor at more than 8 sites. Therefore, you will need to attach additional sheets.

Note that a schematic is required only if it has changed from your approved SSS study plan.

If you deviated from your approved study plan, you must attach an explanation of all deviations.

If you submit your IDSE report electronically, you also have the option to submit attachments in hard copy. Include a note in your electronic IDSE report explaining that attachments are being submitted in hard copy, and mail the hard copy to the IPMC mailing address in your Requirements Summary Sheet. The IPMC will match the hard copy submission with your electronic submission when it is received.

If you are a subpart H system serving >3,300 people, you must submit a copy of your Stage 2 compliance monitoring plan to the state. If you include **compliance calculation procedures** in your IDSE report, the report can meet the requirement of the plan, and you do not have to prepare or submit a separate plan. As a guide for specifying your compliance calculation procedures, refer to the Stage 1 DBPR, 141.133(b), and your Stage 1 compliance monitoring plan. Check with your state, as they may have different requirements under the Stage 2 DBPR.

Enter the total number of pages in your IDSE report (including attachments) in the blank at the bottom of this section. This will allow EPA or your state to ensure that all pages were received.

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Form 3: IDSE Report for an Existing Monitoring Results SSS

Page 1 of 7

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: <input type="checkbox"/> CWS <input type="checkbox"/> NTNCWS	Source Water Type: <input type="checkbox"/> Subpart H <input type="checkbox"/> Ground	Buying / Selling Relationships: <input type="checkbox"/> Consecutive System <input type="checkbox"/> Wholesale System <input type="checkbox"/> Neither
---	---	---

C. PWS Operations

Residual Disinfectant Type: Chlorine Chloramines Other _____

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

D. Contact Person*

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. STAGE 2 DBPR REQUIREMENTS*

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

_____ Highest TTHM _____ Stage 1 DBPR _____ Highest HAA5

Form 3: IDSE Report for an Existing Monitoring Results SSS

Page 2 of 7

II. STAGE 2 DBPR REQUIREMENTS (continued)*

B. IDSE Schedule

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

C. Required Stage 2 DBPR Compliance Monitoring Frequency

- During peak historical month (1 monitoring period)
- Every 90 days (4 monitoring periods)

III. ADDITIONAL SSS AND STAGE 1 COMPLIANCE MONITORING RESULTS*

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

A. Where were your TTHM and HAA5 samples analyzed?

- In-House

Is your in-house laboratory certified?

Yes No

- Certified Laboratory

Name of certified laboratory: _____

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

- | TTHM | HAA5 |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> EPA 502.2 | <input type="checkbox"/> EPA 552.1 |
| <input type="checkbox"/> EPA 524.2 | <input type="checkbox"/> EPA 552.2 |
| <input type="checkbox"/> EPA 551.1 | <input type="checkbox"/> EPA 552.3 |
| | <input type="checkbox"/> SM 6251 B |

Form 3: IDSE Report for an Existing Monitoring Results SSS

III. ADDITIONAL SSS AND STAGE 1 DBPR MONITORING RESULTS (Continued)*

C. TTHM Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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							

¹ Verify that site IDs match the site IDs in your SSS Plan.

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

Form 3: IDSE Report for an Existing Monitoring Results SSS

III. ADDITIONAL SSS AND STAGE 1 DBPR MONITORING RESULTS (Continued)*

D. HAA5 Results

Site ID ¹	12-month period	Data Qualifies (yes/no)	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						

¹ Verify that site IDs match the site IDs in your SSS Plan.

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

Form 3: IDSE Report for an Existing Monitoring Results SSS

IV. 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.

Form 3: IDSE Report for an Existing Monitoring Results SSS

V. PEAK HISTORICAL MONTH

A. Peak Historical Month* _____

B. Is Your Peak Historical Month the Same as in Your SSS Plan?

Yes No

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

VI. 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

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 3: IDSE Report for an Existing Monitoring Results SSS

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VII. DISTRIBUTION SYSTEM SCHEMATIC*

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

ATTACH a schematic of your distribution system if it has changed since you submitted your Existing Monitoring Results SSS Plan (Form 2).

VIII. ATTACHMENTS

- Additional sheets for Additional SSS Monitoring Results (Section III).
- Additional sheets for Stage 2 DBPR 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 compliance monitoring dates (Section VI). **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 VII). **REQUIRED if it has changed from your approved SSS plan.**
- Compliance calculation procedures (for Stage 2 Compliance Monitoring Plan).

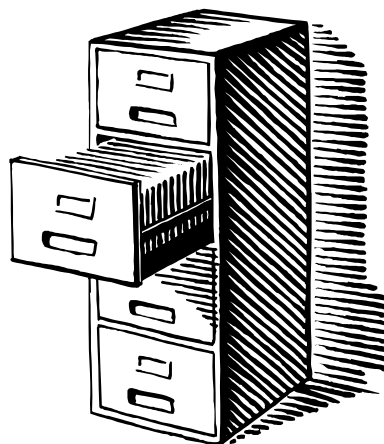
Total Number of Pages in Your Report: _____

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

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5.4 Recordkeeping

The IDSE SSS report must be kept on file for **10 years** after the date it is submitted. If EPA or your state modifies the recommendations made in your report or approves alternative Stage 2 DBPR compliance monitoring locations, you must also keep a copy of EPA or your state's notification on file for 10 years after the date of the notification. You must make your IDSE report and any notification available for review by your state or the public.



The SSS plan, including any modifications by EPA or your state, must also be kept on file for as long as you are required to retain your IDSE SSS report. You must make the plan and any modifications available for review by your state or the public.

5.5 Next Steps: Preparing the Stage 2 DBPR Compliance Monitoring Plan

As the final step before you can begin compliance monitoring for the Stage 2 DBPR, you must develop and implement a **Stage 2 DBPR monitoring plan** by the deadline provided in your requirements summary sheet. The plan will be similar to your Stage 1 DBPR monitoring plan in that it will identify how you intend to sample for compliance with Stage 2. You must keep your plan on file for state and public review. If you are a subpart H system serving > 3,300 people, you **must** submit your plan to EPA or your state prior to when you are required to start monitoring.

Exhibit 5.6 contains the minimum requirements for what must be included in your Stage 2 DBPR compliance monitoring plan. Because compliance monitoring plans are not addressed as part of the IDSE provisions of the Stage 2 DBPR, ***EPA has not included detailed guidance for developing Stage 2 compliance monitoring plans in this guidance manual.*** EPA plans to develop other manuals and training that address the compliance monitoring provisions of the Stage 2 DBPR.

See EPA's website <http://www.epa.gov/safewater/disinfection/stage2> for an up-to-date inventory of Stage 2 DBPR guidance manuals and training materials, or call the Safe Drinking Water Hotline at 1-800-426-4791.

Exhibit 5.6 Required Contents of Stage 2 DBPR Compliance Monitoring Plans

All Systems	Additional Requirements for Consecutive and Wholesale Systems ¹
<ul style="list-style-type: none">• Monitoring locations• Monitoring dates• Compliance calculation procedures	<ul style="list-style-type: none">• If your state has used its special primacy authority to modify your monitoring requirements, you must include monitoring plans for other systems in your combined distribution system

1. See Appendix D of this manual for guidance specifically for consecutive and wholesale systems