SDWIS Prime CY19R1 Release Reference Guide

# Introduction

This document provides an overview of features and functionality included in the January 2019 Release (CY19R1) of the Safe Drinking Water Information System (SDWIS) Prime application. It describes new features added to different modules of the application, new Business Rules Engine (BRE) integration capabilities, and user interface (UI) enhancements.

The Compliance Monitoring Data Portal (CMDP) Release Notes are published separately. The CY19R1 CMDP Release Notes will be accessible via the CMDP Help Center: <https://cmdp.zendesk.com/hc/>.

# New Features

* The ability for users to see an originating sample that triggered the creation of a candidate Monitoring Schedule.
* The ability to view the originating sample result when viewing repeat or triggered monitoring schedules generated by the BRE.
* System Administration module to allow Primacy Agency System Administrators to add their own values in existing picklists. In this release, Primacy Agency System Administrators can add the following picklist values through a template and upload process:
	+ Picklist values for Deficiency Types so that users can select those values when maintaining Deficiencies in Site Visits. .
	+ Picklist values for analyte groups so that users can select those values when entering sample results. Note: the functionality to add one analyte to a group was completed; however, this functionality didn’t meet the expected outcomes in test case 38a. See Appendix B Known Issues, SP-5788.
* The ability for users to run monitoring and reporting (M/R) compliance for water systems in a specific Primacy Agency and for a specific Rule.

# BRE Integration

Test cases are included to demonstrate additional BRE capabilities for the following "Rules" (based on the National Primary Drinking Water Regulations - NPDWR). See Appendix A for more details:

1. Revised Total Coliform Rule (RTCR). Major outcomes generated by the BRE:
	1. Candidate repeat monitoring schedule created
	2. Candidate E. Coli violation created
	3. Candidate 3A Minor monitoring violations created
	4. Linking the originating sample result to candidate repeat and triggered monitoring schedules when generated by the BRE.
2. Disinfection Byproducts Precursors (DDBP). Major outcomes generated by the BRE:
	1. Minor candidate monitoring violation (27) for Total Trihalomethanes (TTHM) and Haloacetic Acids (five) (HAA5)
	2. Major candidate monitoring violation (27) for TTHM and HAA5 for failure to sample at the appropriate sampling point
	3. Major candidate monitoring violation (27) for TTHM and HAA5 for failure to sample every 90 days
3. Ground Water Rule (GWR). Major outcomes generated by the BRE:
	1. Ground Water Rule (GWR) triggered monitoring schedules created
	2. Candidate violation (45) for failure to address a deficiency
4. Nitrate Rule. Majory outcomes generated by the BRE:
	1. Create candidate monitoring schedules based on inventory data.
	2. Create candidate monitoring violations.
	3. Create a candidate confirmation monitoring schedule for nitrate and associate the originating routine nitrate sample result to the candidate schedule.
5. Inorganic Chemicals (IOC) Rule. Majory outcomes generated by the BRE:
	1. Create candidate monitoring schedules based on inventory data.
	2. Create candidate monitoring violations.

See Appendix A for more details on the Test Cases used to develop this release

# Enhancements

* The Samples module has been enhanced to make searching, creating, and modifying samples faster and easier
* Features were added to the Sample Results grids to enable filtering capabilities

# Appendix A: BRE Test Cases Outline

These test cases are listed by regulation from the NPDWR. The test cases demonstrate the Rule Applicability, Sample Result Evaluation, Monitoring and Reporting (M&R) Compliance, Activity Evaluation, and Monitoring Schedule Determination; see the table below for a summary of the expected outcomes. The test cases do not demonstrate Return to Compliance Determination.

| Count | ID | Rule/Component | Test Description | Summary of Expected Outcomes | Known Issues that Impact Steps or Expected Outcomes |
| --- | --- | --- | --- | --- | --- |
| 1 | 32. | Global M/R Compliance Determination for RTCR, NO3, and IOC | Run M/R compliance globally for water systems in a specific regulating agency and for a specific Rule. | The BRE should:* Generate candidate monitoring schedules for different rules (RTCR, nitrate, and IOC) depending on the water system inventory data
* Create a set of candidate monitoring violations for certain rules when M/R compliance is run
 | If users also run compliance for the 'SOC' Rule, candidate monitoring violations are not generated because of an issue with the SOC monitoring requirement reference records. See SP-6069 in Appendix B. |
| 2 | 33. | RTCR E. coli MCL Violations | Water systems receiving Maximum Contaminant Level (MCL) violations for different reason. Scenarios are:(2) Public Water System (PWS) has a Total Coliforms (TC) positive repeat sample following an E. Coli + routine sample(3) PWS fails to take all required repeat samples following an E. Coli + routine sample(4) PWS fails to test for E. Coli when any repeat sample is TC +Scenario (1): The system has an E. coli-positive repeat sample following a total coliform-positive routine sample was completed as part of the September Release Test Case 7b. | The BRE should:* Associate routine RTCR sample results to routine RTCR monitoring schedules
* Create candidate repeat monitoring schedules with the originating sample result associated.
* Create candidate E. Coli MCL violations
* Create candidate monitoring violations
 | While running Test Case 33, some candidate violations created by the BRE might not appear on the violations grid immediately. This behavior does not occur consistently. See SP-5558 in Appendix B. |
| 3 | 34 | Process candidate violations for multiple Rules and water systems | Validate a global set of candidate violations and create PN requirements | Prime should:* Enable a user to adequately filter and sort a list of violations in order to validate a desired set of candidate violations all at once (e.g., all monitoring violations for RTCR for a selected period of time).
* Create appropriate public notification requirements (e.g., Tier 3 PN for monitoring violations) when violations are validated.
 | No known issues impact the expected outcomes of this test case |
| 4 | 35. | Disinfection Byproducts (DBP) M/R Sampling Point Violation | Check that monitoring and reporting compliance is done at the sampling point level when sampling points are included in the monitoring schedule. | The BRE should:* Associate routine results to the routine monitoring schedules
* Create candidate minor monitoring violations (27), one for TTHM and one for HAA5
* Create candidate major monitoring violations (27) for failing to sample at the specified sampling point, one for TTHM and one for HAA5
 | No known issues impact the expected outcomes of this test case |
| 5 | 37. | Disinfection Byproducts (DBP) HAA5 and TTHM M/R Violations | Check that the PWS collects samples in the appropriate month when on quarterly monitoring (e.g., If PWS collects its first quarter samples in January, the following samples must be collected in the first month of subsequent quarters, i.e., April, July, October) | The BRE should:* Associate routine results to the routine monitoring schedule
* Create candidate monitoring violations (27) because samples were collected more than 90 days after the previous samples, one for TTHM and one for HAA5
 | No known issues impact the expected outcomes of this test case |
| 6 | 39. | GWR | Deficiencies were identified in a sanitary survey for a PWS. PWS fails to address one deficiency. | The BRE should:* Create a candidate violation (45) for failing to address a deficiency
 | When selecting a Deficiency Type for a Deficiency, Prime does not set the Severity to the default value for the selected Deficiency Type. This impacts the step in which users enter a Deficiency, but does not impact the expected outcomes. A work around exists. See SP-5592 in Appendix B.Other issues found during the testing of Test Case 39, but none of them impact the expected outcomes. See SP-SP-5956, in Appendix B. |
| 7 | 40. | RTCR, Nitrate | PWS collects a positive TC and a Nitrate result above the MCL. | The BRE should:* Associate routine results to routine monitoring schedules
* Create a candidate repeat monitoring schedule for RTCR and display the originating routine sample result
* Create one or more candidate triggered monitoring schedules and display the originating routine RTCR sample result
* Create a candidate confirmation monitoring schedule for NO3 and display the originating routine nitrate sample result

*(Note: Prime will display these results and information about the sample on the user interface when viewing the candidate monitoring schedules)*  | Candidate triggered monitoring schedules do not display the Originating Result.Users can, however, select the originating result using the Originating Result dropdown. See SP-5623 in Appendix B. |

# Appendix B: Known Issues

The table below contains a list of issues that are known to exist in CY19R1, the impact on functionality, and ways to overcome the issue if those ways are available.

| Jira Ticket Number | Jira Ticket Issue Description | Impact on Functionality | Test Case Impacted |
| --- | --- | --- | --- |
| SP-3064 | Sample Screens: Retention of unsaved data while navigating between modules | Users can’t view the unsaved Sample values they entered when they navigate to a different module saving, such as Water Systems, and then return to the Samples module. The work around is for users to save the Samples data before navigating to a different module.The issues will be addressed in CY19R3. | No test cases impacted |
| SP-4634 | Monitoring Schedule: Time Zone issue affecting Dates | The SDWIS database captures the data and time for every date field. However, the application inconsistently applies time to dates. In the case of Monitoring Schedules, this inconsistency can cause a discrepancy between the date displayed on the grid and the date displayed in the modal window. This issue has been resolved and will be released in CY19R2. | Test Case 7c. |
| SP-4752 | The BRE calculates an incorrect OEL value for HAA5 for some quarters. | Users will see an incorrect value with more decimal places than expected displayed for the OEL.Further analysis of the CFR is needed to determine if this issue should be fixed for the specific scenario.  | No test cases impacted |
| SP-5031 | An invalid error message is displayed when entering an Actual Completion Date for a Task in Scheduled Activities. | Users will need to click ‘Yes’ on the error message prior to saving the change.This issue has been resolved and will be available in CY19R2. | No test cases impacted |
| SP-5500 | When rescinding a violation, the status of the violation might not be displayed until the grid is refreshed | Users will have to click the refresh button to see the violation status changed to “Rescinded.”This issue has been resolved and will be available in CY19R2. | No test cases impacted |
| SP-5557 | For Test Case 12a and 11a, the candidate violation created by the BRE is missing the contaminant code. | Users will not see the contaminant code when opening the candidate violation but will be able to select it if they click the contaminant field.This issue has been resolved and will be available in CY19R2. | Test Cases 11a and 12a |
| SP-5558 | While running Test Case 33, some candidate violations created by the BRE might not appear on the violations grid immediately. | If this issue arises, users might need to close the water system and open it again to see the violations in the grid. This behavior does not occur consistently. Testing for this issue is needed in Pre-Production. | Test Case 33 |
| SP-5592 | When selecting a Deficiency Type for a Deficiency, Prime does not set the Severity to the default value for the selected Deficiency Type.  | Users will need to manually select the appropriate Severity for the Deficiency.This issue has been resolved and will be available in CY19R2. | Test Case 39 |
| SP-5623 | While running Test Case 40, the candidate GWR triggered monitoring schedules generated by BRE do not display the Originating Sample Result as expected. | Users have to click the Originating Sample dropdown to see and select the originating sample. Some users might overlook this information when viewing the candidate triggered monitoring schedule. This issue has been resolved and will be available in CY19R2. Testing for this issue is needed in Pre-Production.  | Test Case 40 |
| SP-5627 | In the steps to set up Test Case 32, the BRE creates candidate monitoring schedules referencing both RADR-A and RADR-NPDWR Rule/Analyte Groups. The BRE should only create one that references the RADR-NPDWR Rule/Analyte Group. | This is not a blocker for Test Case 32 but might add some confusion to users as to why the BRE created two candidate monitoring schedules for the same radionuclide analyte.This issue has been resolved and will be released in CY19R2. | Found testing Test Case 32, but doesn’t impact the expected outcomes of the test case |
| SP-5691 | When entering samples and you need to reference an original sample (e.g. repeat samples), the Original Sample dropdown for a Microbial sample erroneously displays the same sample twice if it has both a 3100 and a 3014 result. | No impact. | No test cases impacted |
| SP-5706 | The deficiency template used in system administration to upload state-specific deficiency types is missing instructions | Users will not have instructions on how to populate the deficiency template and this might result in data entry errors.This issue has been resolved and will be released in CY19R2. | Found testing Test Case 39, but doesn’t impact the expected outcomes of the test case |
| SP-5720 | In Test Case 7c, ID field for the associated event in the Scheduled Activities module is not displayed | User will not see the reference to the monitoring schedule and monitoring period in the Scheduled Activity created by the BRE. This issue will be addressed in CY19R3. | Test Case 7c. |
| SP-5788 | Test Case 38a issue: Incorrect validation prevents adding multiple analytes to an analyte group.  | Users will only be able to add one analyte to the custom analyte group.This issue has been resolved and will be available in CY19R2. | Test Case 38a |
| SP-5789 | Changes to maintaining deficiencies - “I cannot delete a deficiency once added.” | Users will not be able to delete a deficiency that they created. There is currently no work around.This issue will be addressed in CY19R3. | Found testing Test Case 39, but doesn’t impact the expected outcomes of the test case |
| SP-5874 | Water System Inventory Slow Performance when opening a large water system. | Based on testing in the RTE, for large water systems, users might experience the application taking a longer than expected amount of time to display the water system summary. This issue will be addressed in CY19R3.  | Found when opening a large water system, but doesn’t impact the expected results of any test cases |
| SP-5878 | Deficiency, changes to Deficiency Grid – “Deficiencies do not show up in the Deficiency list using the task picker if there is not facility associated to it. Deficiencies are not required to be linked to a facility.” | In the Deficiencies grid, users will not be able to view a deficiency record that doesn’t have a Facility associated with it.The work around is to select a Facility when creating or editing a deficiency. ‘This issue has been resolved and will be released in CY19R2. | Found testing Test Case 39, but doesn’t impact the expected outcomes of the test case |
| SP-5955 | Deficiency, changes to maintaining deficiencies – “If I change a deficiency’s severity, the corresponding Element Evaluation Summary category doesn't get updated” | Users will not see the correct values for the Element Evaluation Summary categories. There is currently no work around.This issue will be addressed in CY19R3. | Found testing Test Case 39, but doesn’t impact the expected outcomes of the test case |
| SP-5956 | Deficiency, changes to maintaining deficiencies - "Will not let me manually change the category from significant deficiency to recommendation. I get a 'You cannot change to a lesser severity‘ error message.  | Users will not be able to update the severity for a deficiency to a lesser severity. There is currently no work around. This issue will be addressed in CY19R3. | Found testing Test Case 39, but doesn’t impact the expected outcomes of the test case |
| SP-6025 | Deficiency, Violations – “I can't manually update the Facility in the violation maintenance screen. The modal properly allows a facility to be selected for a validated violation but the save icon is not enabled when one is selected. | Users will not be able to change the Facility associated to a violation. There is currently on work around.This issue will be addressed in CY19R2. | Found testing Test Case 33, but doesn’t impact the expected outcomes of the test case |
| SP-6038 | RTCR E. coli MCL Violations – After clearing the duplicate check message for a Sample ID, users changes the sample ID and attempted to save. The updated Sample ID to address the duplicate message is not saved. Hitting save should always save results with it even after making a change due to a sample entry error.”  | This issue could not be replicated.The SDWIS Development Team will monitor this issue.  | Found testing Test Case 33, but doesn’t impact the expected outcomes of the test case |
| SP-6039 | RTCR E. coli MCL Violations If user opens a candidate violation from either the global violation grid or the water-system-centric violation grid and validates the violation, the user is prohibited from changing the Issue Date. The user should be able to change the date and the date can be a future date. | Users will not be able to update the Issued Date. There is currently no work around. This issue will be addressed in CY19R3.  | Found testing Test Case 33, but doesn’t impact the expected outcomes of the test case |
| SP-6040 | RTCR E. coli MCL Violations – “you get an Error message saying you cannot choose an issue date in the future.” | Users will not be able to enter an Issued Date that is in the future.The work around is to enter an Issued Date that is before today’s date. This issue has been resolved and will be available in CY19R2.  | Found testing Test Case 33, but doesn’t impact the expected outcomes of the test case |
| SP-6045 | DBP M/R Sampling Point Violation, “unable to add a source or treatment plant” | Users will not be able to save a newly created source or treatment plant. The work around is to use an existing source or treatment plant when testing.This issue will be addressed in CY19R3. | Found testing Test Case 35, but doesn’t impact the expected outcomes of the test case |
| SP-6069 | Test Case 32: the monitoring and reporting compliance determination feature for SOC is not creating candidate monitoring violations as expected. This issue was due to an issue with the reference records for SOC monitoring requirements.  | Users will not see candidate monitoring violations generated by the BRE for the SOC rule. This issue has been resolved and will be available in CY19R2. | Test Case 32 |
| SP-6403 | Prime, including the business rule engine (BRE) sometimes has performance issues  | Some test case outcomes, like the one for Test Case 4c - Monitoring Violation for all VOC in a MS, may take a while before they are visible. This issues will be addressed in CY19R3. | Test Cases 4c, 32 |