

# **Appendix I**

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## **State Reporting Guidance for the Arsenic Rule**

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United States  
Environmental Protection  
Agency

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# State Reporting Guidance for the Arsenic Rule

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### ***Disclaimer***

*This document provides guidance to State Directors, Tribes, and U.S. Environmental Protection Agency (EPA) Regions and States exercising primary enforcement responsibility under the Safe Drinking Water Act (SDWA).*

*SDWA provisions and EPA regulations described in this document contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. Any decisions regarding a particular facility will be made based on the applicable statutes and regulations. Therefore, interested parties are free to raise questions and objections about the appropriateness of the application of this guidance to a particular situation, and EPA will consider whether or not the recommendations or interpretations in the guidance are appropriate in that situation. EPA may change this draft guidance in the future.*

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## Abbreviations

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**µg/L** – Micrograms per liter, same as parts per billion (ppb)  
**CFR** – Code of Federal Regulations  
**CWS** – Community water system  
**DTF** – Data transfer format  
**EPTDS** – Entry point to the distribution system  
**FR** – Federal Register  
**GW** – Ground water  
**ICP-AES** – Inductively coupled plasma atomic emission spectroscopy  
**ICP-MS** – Inductively coupled plasma mass spectroscopy  
**IOCs** – Inorganic contaminants  
**MCL** – Maximum contaminant level  
**mg** – Milligrams  
**mg/L** – Milligrams per liter  
**M/R** – Monitoring or reporting violations  
**NTNCWS** – Non-transient non-community water system  
**PN** – Public notification  
**PWS** – Public water system  
**PWSID** – Public water system identification number  
**SDWA** – Safe Drinking Water Act  
**SDWIS/FED** – Safe Drinking Water Information System/Federal Version  
**SDWIS/STATE** – Safe Drinking Water Information System/State Version  
**SNC** – Significant noncomplier  
**SOCs** – Synthetic organic contaminants  
**SW** – Surface water  
**URTH** – Unreasonable risk to health  
**VOCs** – Volatile organic contaminants

## I. Introduction

The purpose of this document is to define the reporting requirements and related Safe Drinking Water Information System/Federal Version (SDWIS/FED) Data Transfer Format (DTF) file layout for information required under the Arsenic and Clarifications to Compliance and the New Source Monitoring Rule published in the Federal Register on January 22, 2001 (66 FR 6976). This document addresses the requirements for State and Tribal reporting to EPA and the definitions of monitoring, reporting, violations and return to compliance data applicable to community water systems (CWSs) and non-transient non-community water systems (NTNCWSs). Such reporting is required under Section 1445 of the Safe Drinking Water Act (codified at Section 142.15 of Title 40 of the *Code of Federal Regulations*). In this guidance, the term “State” also includes Indian Tribes with primacy (e.g., the Navajo Nation), which are determined according to the requirements of 40 CFR Subpart H.

The Final Arsenic Rule was published in the Federal Register on January 22, 2001 (66 FR 6976). The Final Rule is applicable to CWSs and non-transient non-community water systems NTNCWSs, updates the current maximum contaminant level (MCL) for arsenic, and clarifies compliance and new source contaminant monitoring requirements.

The effective date of the Arsenic Rule is February 22, 2002, and the effective date for purposes of compliance with the new consumer confidence reporting requirements for arsenic is also February 22, 2002 (40 CFR 141.6(j)). The date for systems to begin to comply with the clarified monitoring and compliance determinations for inorganic contaminants (IOCs), volatile organic contaminants (VOCs), and synthetic organic contaminants (SOCs) is January 22, 2004 (40 CFR 141.6(k)).

The Final Rule establishes an arsenic MCL of 0.01 mg/L (10 µg/L or 10 ppb) (40 CFR 141.62(b)(16)). The compliance date of the revised arsenic MCL is January 23, 2006 (40 CFR 141.6(j)). The Rule also finalizes an MCLG for arsenic of 0 mg/L (40 CFR 141.51(b)).

The Rule’s clarifications to compliance specify that contaminants subject to 40 CFR 141.23(i)(2), 141.24(f)(13)&(15)(iii), and 141.24(h)(9)&(11)(iii) will be based on the running annual average of the initial MCL exceedances and subsequent state-required confirmation samples. In addition, the clarifications address calculation of compliance when a system fails to collect the required number of samples. Compliance averages will be based on the total number of samples collected, not the number of samples required. Uncollected samples are still a monitoring and reporting violation. For purposes of calculating MCL averages, non-detections continue to be set at zero unless States specify another value (e.g., the detection limit or a fraction of the detection limit) (40 CFR 141.23(i), 141.24(f)(15), and 141.24(h)(11)).

All new systems, or systems that use a new source of supply, that begin operation after January 22, 2004, must demonstrate compliance with the MCLs within a period of time specified by the State. The State must specify sampling frequencies to ensure that a system can demonstrate on-going compliance with MCLs (40 CFR 141.23(c)(9), 141.24(f)(22), and 141.24(h)(20)). This requirement is effective for all contaminants listed in 40 CFR 141.23(c) and 141.24.

This guidance document is designed for use by State program officials; however, States may at their discretion share components of this guidance with public water systems (PWSs), drinking water laboratories, and others in the drinking water community.

EPA and State decision makers retain the discretion to adopt approaches that differ from this guidance where appropriate on a case-by-case basis. Any decisions regarding a particular facility will be made based on the applicable statutes and regulations. Therefore, interested parties are free to raise questions and objections about the appropriateness of the application of this guidance to a particular situation, and EPA will consider whether or not the recommendations or interpretations in the guidance are appropriate in that situation. EPA may change this guidance in the future.

## II. Federal Monitoring and Reporting Requirements

This section presents the monitoring requirements for arsenic under the Final Arsenic Rule.

### A. Arsenic Compliance Monitoring

#### 1. Monitoring Location

Systems that use more than one source that are combined before distribution (e.g. an intermittent source of supply or a supply affected by seasonal demand) must sample at an entry point to the distribution system (EPTDS) during periods of normal operating conditions (i.e. when the water is representative of the water that usually enters the system) (40 CFR 141.23(a)(3)) unless:

- The State has determined that conditions make another sampling point more representative of each source (40 CFR 142.11(a)(1) and 141.23(a)(1)); or,
- The State has modified the monitoring requirements of a PWS that supplies water to one or more other PWSs and the interconnection of the systems justifies treating them as a single system for monitoring purposes (i.e., consecutive PWSs) (40 CFR 141.29).

#### 2. Monitoring Frequency

The Rule makes the arsenic monitoring requirements consistent with monitoring for other IOCs regulated under the Phase II/V standard monitoring framework. The compliance date for requirements related to the revised arsenic standard is January 23, 2006. The 2005-2007 compliance period is the first monitoring period under the new MCL. Because the Final Arsenic Rule allows grandfathered data and waivers, systems should not have to deviate from their current monitoring scheme.

Ground water systems required to sample once every three years must complete sampling by December 31, 2007, and surface water systems required to sample annually must complete sampling by December 31, 2006 (40 CFR 141.23(c)(1)). The State may require more frequent monitoring or may require confirmation samples for positive or negative results (40 CFR 141.23(g)). Similarly, systems may apply to the State to conduct more frequent monitoring (40 CFR 141.23(h)). Other exceptions may apply:

In accordance with the standardized monitoring framework, if compliance monitoring samples show arsenic levels at each sampling point below the MCL, ground water systems must continue to take routine samples once every three years at each sampling point and surface water systems must take annual samples at each sampling point unless directed otherwise by the State (40 CFR 141.23(c)(1)).

States may allow systems to collect up to five samples, which may be composited by the laboratory. The laboratory that analyzes the samples must use a method with a detection limit of 0.002 mg/L (2 µg/L; i.e. 1/5th of the MCL) (40 CFR 141.23(a)(4)). If the five composited samples are above 1/5th of the MCL, the system must take follow-up samples at each sampling point within 14 days (40 CFR 141.23(a)(4)). Compliance determinations will be based on the follow-up sample result. EPA encourages States to discontinue allowing systems to composite samples if arsenic is detected at levels greater than 1/5th the MCL.

To satisfy the monitoring requirements for the revised arsenic MCL, all new systems or systems that use a new source that begin operation after January 22, 2004, must begin complying with the clarified

compliance and new source contaminant monitoring, in accordance with a State-specified plan (40 CFR 141.23(c)(9)).

### 3. Increased Monitoring

Any system that has a sampling point monitoring result that exceeds the MCL must increase the frequency of monitoring at that sampling point to quarterly sampling<sup>1</sup> (40 CFR 141.23(c)(7)). Quarterly sampling must begin the quarter after the exceedance occurred and continue until the State determines that the system is reliably and consistently below the MCL<sup>2</sup> (40 CFR 141.23(c)(7)&(8)). States may also set a sampling schedule as a condition to a variance, exemption, or enforcement action. States may require a system that fails to take a quarterly sample either to collect the missing sample as soon as possible or to collect the sample the following year in the quarter that was missed.

Systems triggered into increased monitoring will not be considered in violation of the MCL until they have completed one year of quarterly sampling.<sup>3</sup> However, if any sample result will cause the running annual average to exceed the MCL at any sampling point (e.g., the sampling result is four times the MCL), the system is out of compliance with the MCL immediately.

Systems with an MCL violation must meet all public notification (PN) requirements (40 CFR Part 141 Subpart Q). See the Public Notification section below.

#### B. Grandfathered Arsenic Data

##### 1. Ground Water Systems

For ground water systems, the term grandfathered data refers to monitoring samples collected between January 1, 2005, the start of the first compliance period for ground water systems for the revised MCL, and January 23, 2006, the compliance date for the new MCL. Because January 23, 2006, falls in the middle of a compliance period, States may allow systems to use grandfathered data collected after January 1, 2005, to satisfy the sampling requirements for the compliance period.

States may allow systems to grandfather data under the following circumstances (40 CFR 141.23(c)(4)):

- The system collects its sample for the 2005-2007 compliance period between January 1, 2005, and January 23, 2006;

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<sup>1</sup>States have the flexibility to require confirmation samples.

<sup>2</sup>Reliably and consistently below the MCL means that a groundwater system has collected a minimum of two consecutive quarters of samples at the sampling point with the exceedance and a surface water system has collected four consecutive quarters of samples at the sampling point with the exceedance (40 CFR 141.23(c)(8)).

<sup>3</sup>For the purpose of calculating the running annual average, the initial exceedance is considered to be the first quarterly sample.

- The data are consistent with the sampling/analytical methodology approved for use by this Rule; and,
- The method detection limit is less than 0.008 mg/L (8 µg/L).

Data collected using inductively coupled plasma atomic emission spectroscopy (ICP-AES) technology are not eligible for grandfathering because EPA has determined that these methods are not adequate to “reliably determine the presence of arsenic . . . even at . . . 0.010 mg/L . . . for compliance monitoring of arsenic in drinking water” (65 FR 38913).

Ground water systems that do not use grandfathered data must collect a sample by December 31, 2007, to demonstrate compliance with the revised MCL (40 CFR 141.23(c)(1)).

## 2. Surface Water Systems

For surface water systems, the term grandfathered data refers to monitoring samples collected between January 1, 2006, the start of the first compliance period for surface water systems for the revised MCL, and January 23, 2006, the compliance date for the new MCL. Because January 23, 2006, falls in the middle of a compliance period, States may allow systems to use grandfathered data collected after January 1, 2006, to satisfy the sampling requirements for the compliance period.

States may allow systems to grandfather data under the following circumstances (40 CFR 141.23(c)(4)):

- The system collects its annual sample for 2006 between January 1, 2006, and January 23, 2006;
- The data are consistent with the sampling/analytical methodology approved for use by this Rule; and,
- The method detection limit is less than 0.008 mg/L (8 µg/L).

Data collected using ICP-AES technology are not eligible for grandfathering because EPA has determined that these methods are not adequate to “reliably determine the presence of arsenic . . . even at . . . 0.010 mg/L . . . for compliance monitoring of arsenic in drinking water” (65 FR 38913).

Surface water systems that do not use grandfathered data must collect a sample by December 31, 2006, to demonstrate compliance with the revised MCL (40 CFR 141.23(c)(1)).

## 3. Grandfathering of Results Above the MCL

If grandfathered data are used to comply with the compliance period and the analytical result is greater than 0.01 mg/L (10 µg/L), that system will be in violation of the revised MCL on the effective date of the Rule.

### C. Monitoring Waivers

Because the Final Rule incorporates arsenic into the standard monitoring framework for IOCs, States may grant a nine-year monitoring waiver to a system. States must consider all previous monitoring

data; the variation in reported concentrations; and other factors that may affect concentrations such as changes in pumping rates, system configuration, operating procedures, or stream characteristics (40 CFR 141.23(c)(5)). The State should also consider the quality and amount of data available, the length of time covered, the volatility/stability of the sampling results, and the proximity of results to the MCL. Source water assessments currently being conducted by the States are another valuable tool that may assist States in determining whether to grant a waiver. In deciding whether to grant a waiver, States should use all available information.

#### 1. System Eligibility

To qualify for an arsenic waiver, a system must have data from three previous sampling periods. This includes data collected during the following compliance periods: 1990-1992, 1993-1995, 1996-1999, 2002-2004, and 2005-2007. The analytical results from all samples must be below the MCL (0.01 mg/L or 10 µg/L), and the data must be consistent with the analytical methodology and detection limits of the Arsenic Rule (40 CFR 141.23(c)(4)).

Systems may be eligible for waivers if (40 CFR 141.23(c)(3)&(4)):

- Ground water systems have data below the MCL from three sampling periods. This includes data collected from three compliance periods between 1990 and 2007 that are consistent with the analytical methodology of the Arsenic Rule.<sup>4</sup> Once a waiver is issued, the system must take at least one sample during each nine-year period.
- Surface water systems have data below the MCL from three sampling periods. This includes data collected between 1990 and 2007 that are consistent with the analytical methodology in the Arsenic Rule.<sup>5</sup> Once a waiver is issued, the system must take at least one sample during each nine-year waiver period.

#### D. Arsenic Violations

EPA views violations on a system-specific basis; therefore, violations should be reported to SDWIS/FED by system only (i.e., not by entry point or sampling point). For EPA purposes, each system can be in violation only one time for each type of violation, for each contaminant, and for each monitoring period -- even though the PWS may have had multiple violations of the same type and for the same contaminant and monitoring period, at multiple sampling points. In choosing which sampling point to report for the same type of violation, always report the more severe violation.

States must report federal MCL and monitoring and reporting (M/R) violations to SDWIS/FED within 45 days after the end of the quarter in which the violation occurs.

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<sup>4</sup>After January 23, 2006, analytical methods using ICP-AES technology may not be used because the detection limits for these methods are 0.008 mg/L (8 µg/L) or higher (40 CFR 141.23(k)(1)). This restriction means that the two ICP-AES methods (EPA Method 200.7 and SM 3120 B) may not be used for compliance determinations.

<sup>5</sup>After January 23, 2006, analytical methods using ICP-AES technology may not be used because the detection limits for these methods are 0.008 mg/L (8 µg/L) or higher (40 CFR 141.23(k)(1)). This restriction means that the two ICP-AES methods (EPA Method 200.7 and SM 3120 B) may not be used for compliance.

The SDWIS/FED arsenic contaminant code for violation reporting is 1005. **When reporting arsenic violations to SDWIS/FED, arsenic analytical results must be rounded to the nearest 0.001 mg/L (1 µg/L)** (40 CFR 141.23(i)(2)(4)). Violations of the Arsenic Rule include:

1. MCL Violations

States must determine compliance based on the analytical result(s) obtained at each sampling point<sup>6</sup> (40 CFR 141.23(i)). A system is in violation if:

- Any one sampling point exceeds the MCL and then, after four consecutive quarterly samples, the running annual average exceeds the MCL.<sup>7</sup>
- Any result causes the running annual average to exceed the MCL at any sampling point (for example, the analytical result is greater than four times the MCL or two analytical results are greater than twice the MCL).

For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average at each sampling point. Systems monitoring annually or less frequently whose sample result exceeds the MCL, must revert to quarterly sampling for that contaminant the next quarter.<sup>8</sup> Systems are only required to conduct quarterly monitoring at the sampling point at which the sample was collected and for the specific contaminant that triggered the system into the increased monitoring frequency. An exceedance is not necessarily a violation. **Systems triggered into increased monitoring will not be considered in violation of the MCL until they have completed one year of quarterly sampling** unless any sample collected during quarterly monitoring would result in the annual average exceeding the MCL (40 CFR 141.23(i)). In this case, the sampling point will be considered in violation of the MCL immediately.

The running annual average, is calculated from the results of the four previous quarterly samples. The first year, the running annual average would be calculated by averaging the results of quarters 1-4. For the purpose of calculating the running annual average, the initial exceedance is considered to be the first quarterly sample. Starting with quarter 5, the average is determined using the previous four quarters. Quarter 5 results encompass quarters 2, 3, 4, and 5; quarter 6 results encompass quarters 3,4,5,and 6; etc..

Systems may not monitor more frequently than specified by the State to determine compliance unless they have applied to and obtained approval from the State. If a system does not collect all required samples when compliance is based on a running annual average of quarterly samples, compliance will be based on the running annual average of the samples collected. If a sample result is less than the method detection limit, zero will be used to calculate the annual average (40 CFR 141.23(i)(1&2)). States have the discretion to delete results of obvious sampling or analytic errors (40 CFR 141.23(f)(3)).

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<sup>6</sup>For the purposes of compliance determination and monitoring requirements, the State must report results to the nearest 0.001 mg/L (40 CFR 141.23(i)(4)).

<sup>7</sup>States have the flexibility to require confirmation samples. The average of the initial sample and any confirmation samples will be used for the determination of compliance and future monitoring requirements.

<sup>8</sup>States have the flexibility to require confirmation samples. The average of the initial sample and any confirmation samples will be used for the determination of compliance and future monitoring requirements.

States still have the flexibility to require confirmation samples for positive or negative results<sup>9</sup> (40 CFR 141.23(g)). States may require more than one confirmation sample to determine the average exposure (40 CFR 142.11(1)). If confirmation samples are required by the State, the average of the analytical result and the confirmation sample must be used for compliance determinations (40 CFR 141.23(i)(2)).

The Rule requires that monitoring be conducted at all EPTDSs (40 CFR 141.23(a)(1)&(2)). However, the State can require monitoring and determine compliance based on a case-by-case analysis of individual drinking water systems. EPA encourages drinking water systems to inform State regulators of their individual circumstances. Some systems have implemented elaborate plans including targeted, increased monitoring that is much more representative of the average annual mean contaminant concentration to which individuals are being exposed. (Some States determine compliance based on a time- or flow-weighted average.) In many cases, the State can demonstrate that compliance is being calculated based on scientific methods that are more representative of the true contaminant concentration to which individuals are being exposed over a year, but it substantially increases the sampling and analytical costs. Some States require that systems collect samples from wells that operate for only one month out of the year regardless of whether they are operating during scheduled sampling times. The State may determine compliance based on several factors including the quantity of water supplied by a source, the duration of service of the source, and contaminant concentration.

For the purpose of compliance determination, analytical results for arsenic will be reported to the nearest 0.001 mg/L (40 CFR 141.23(i)(4)). For purposes of rounding, the last digit should be increased by one unit if the digit dropped is 5 or greater. If the digit dropped is 4 or less, do not alter the preceding number. For example, analytical results for arsenic of 0.0105 mg/L would round off to 0.011 mg/L while a result of 0.0104 mg/L would round off to 0.010 mg/L.

Several examples of reporting MCL violations are contained in Appendix A.

## 2. M/R Violations

In accordance with 40 CFR 141.26(a)(1)(i), CWSs must collect compliance samples at every entry point to the distribution system (40 CFR 141.26(a)(1)).

An M/R violation occurs and must be reported for any system that fails to: collect the required number of samples during the specified time frame, in accordance with 40 CFR 141.26; ensure samples are analyzed properly in accordance with 40 CFR 141.25 or; submit all required monitoring information on-time in accordance with 40 CFR 141.31 and 40 CFR 142.15.

In SDWIS/FED, arsenic M/R violations refer to the period of time during which monitoring was to have been performed, such as a quarter, a year, three-year, nine-year, etc. For example, assume a PWS is required to monitor for arsenic annually. If this PWS fails to conduct the required monitoring during the calendar year of 2008, a M/R violation is incurred. When this M/R violation is reported to SDWIS/FED, the State must supply the beginning date, and the ending date of the monitoring period. The beginning date of the yearly monitoring period in this example would be 01/01/2008, the ending date of the monitoring period would be 12/31/2008. The monitoring period begin and end date for a PWS monitoring

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<sup>9</sup>Confirmation samples are any samples that the State requires that go beyond the minimum federally required samples.

quarterly would span a three-month time frame. The monitoring period begin and end date for a PWS monitoring every three years, would encompass a 36-month time frame. M/R violations would continue to occur for each monitoring period, until the system has returned to compliance.

SDWIS/FED M/R violations are expressed with severity indicators of **major** or **minor**. A major M/R arsenic violation is defined as a monitoring or reporting violation in which no samples were collected and/or reported. A minor arsenic violation is defined as a monitoring or reporting violation in which some, but not all, of the required samples were collected and/or reported. For States electing to report by sample point, any violation during a monitoring period will be a “major” violation, since in this case it would be impossible for a PWS to conduct some but not all of the required monitoring. If reporting at the system level, systems with multiple sample points may conduct monitoring at some points but not all points; such violations would be coded as “minor” violations. Systems which do not conduct monitoring at any of the points will have violations coded as “major”.

Table 1. Determination of SDWIS/FED Violation Begin and End Dates	
Monitoring Period	Violation Begin-End Date
Quarterly	1/1/YYYY - 3/31/YYYY 4/1/YYYY - 6/30/YYYY 7/1/YYYY - 9/30/YYYY 10/1/YYYY - 12/31/YYYY
Annually	1/1/YYYY - 12/31/YYYY
Every 3 Years	1/1/YYYY - 12/31/YYYY
Every 9 Years	1/1/YYYY - 12/31/YYYY

Several examples of reporting M/R violations are contained in Appendix A.

3. Variance/Exemption/Other Compliance Schedule Violations

a. Small System Variances

EPA did not identify small system variance technologies for arsenic under SDWA §1415(e). Therefore, small system variances are not available for the Final Arsenic Rule.

b. General Variances

If a system cannot meet MCLs because of the characteristics of its raw water sources, it may be eligible for a variance under SDWA §1415(a) and 40 CFR 142.20(a) on condition that:

- The system install a BAT (all system sizes), a SSCT (systems serving fewer than 10,001 people), or other means as determined by EPA (SDWA §1415(a)(1)(A) and 40 CFR 142.62(c)); and,
- A State evaluation indicates that alternative sources of water are not reasonably available (SDWA §1415(a)(1)(A)).

While a variance may allow a system to provide water that exceeds the MCL, it will only be granted if the quality of the water delivered under the variance will not result in an unreasonable risk to health (SDWA §1415(a)(1)(A)).

Eligibility for a variance from the MCLs for arsenic requires that the public be given an opportunity for a public hearing on the new schedule and that the system install, operate, and maintain a technology specified in the Final Arsenic Rule and enter into a compliance schedule with the primacy agency (SDWA §1415(a)(1)(A) and 40 CFR 142.62(b)&(c)).

#### c. Exemptions

Exemptions can be an important tool for States to assist small systems compliance with the Arsenic Rule. Under appropriate conditions, exemptions can afford certain systems additional time needed to acquire financial assistance and develop mechanisms necessary to ensure compliance.

PWSs are required to meet the new MCL for arsenic by January 23, 2006 (40 CFR 141.6(j)). SDWA §1416(a) and 40 CFR 142.20(b) allow a State to grant an exemption to a PWS from the arsenic MCL if it meets all of the following four criteria:

- Due to compelling factors, the system is unable to achieve compliance by January 23, 2006, through any means, including treatment or alternative source of water supply.
- The exemption will not result in an unreasonable risk to health.
- The system was in operation by February 22, 2002, and the system was not operating by the effective date of the Rule, the system has no reasonable alternative source of drinking water available to it.
- The system cannot reasonably make management and/or restructuring changes that would result in compliance or improve the quality of drinking water if compliance cannot be achieved.

If granted an exemption, a PWS would have an additional three years to comply (January 23, 2009). When granting an exemption, the State must issue a schedule requiring compliance with the MCLs as expeditiously as practicable but no later than January 23, 2009 (SDWA §1416(a)((2)(A))). Systems serving fewer than 3,300 people may be eligible for up to three additional two-year exemptions, allowing them to delay compliance for a total of nine years beyond 2006 (40 CFR 142.20(a)(2)). Therefore, some small systems may be given exemptions allowing them 14 total years after the Rule was published to obtain their needed financial assistance and implement compliance strategies to comply with the new arsenic MCL. EPA believes that these criteria can be met.

#### d. Variance and Exemption Compliance Determination

When a PWS does not adhere to the Variances, Exemptions and Other Compliance Schedules stated under 40 CFR 141.26 and 142.65, a violation must be reported to SDWIS/FED. Refer to the *Implementation Guidance for Arsenic* for more detailed information on small system compliance technologies, general variance requirements and exemption criteria.

E. SDWIS/FED Reporting

Table 1 is a summary of proposed Safe Drinking Water Information System/Federal (SDWIS/FED) reporting requirements for the Final Arsenic Rule. The summary contains SDWIS/FED violation and contaminant codes. It is important to note that the SDWIS/FED reporting requirements for the Final Arsenic Rule are no different from the existing reporting requirements for IOCs under the Phase II/V Rules.

**Table 2. Final Arsenic Rule Federal Reporting Violations**

Contaminant Code	Contaminant	Violation Code/Definition
1005	Arsenic	02 MCL, Average
		03 Failure to Monitor/Report
		04 Failure to Monitor/Report, Check/Repeat/Confirmation
		06 Failure to Provide the Appropriate Public Notification
		08 Variance/Exemption/Other Compliance

For each arsenic violation listed above, the State reports the following data to SDWIS/FED. Section III (SDWIS/FED Data Transmittal) explains these data elements in more detail.

- ▶ A unique PWS-ID
- ▶ A unique violation ID
- ▶ A code identifying the contaminant for which the violation applies
- ▶ A code describing the type of violation
- ▶ Calendar date of the beginning of the monitoring period
- ▶ Calendar date of the end of the monitoring period
- ▶ Analysis Result causing the violation, rounded to the nearest 0.001 mg/l (1 ppb) **(For MCL violations only)**
- ▶ A code designating whether the violation is of major or minor severity **(For M/R violations only)**
- ▶ A source/entity ID at which the violation was incurred **(The 5-character Source/Entity ID if reporting by sampling point; leave blank to report by system)**

F. Return to Compliance and Enforcement Actions

When a MCL or M/R violation has been incurred, it must be reported to SDWIS/FED. In addition, the State must inform EPA when that violation has been appropriately resolved. Returned To Compliance (RTC) is defined for an MCL violation as subsequent monitoring shows system is below the MCL. RTC is defined for an M/R violation as system is reporting in accordance with requirements.

In addition, all formal enforcement actions taken against violations of this rule are required to be reported to SDWIS/FED. Both “returned to compliance” and formal enforcements must be linked to the specific violation(s) they address. The following describes the appropriate ways in which enforcement and follow-up actions, formal and informal (including returned to compliance), may be linked to Arsenic rule violations:

**Associated Violation IDs (Y5000) - FY & VIOLATION ID NUMBER.**

Entering the specific violation ID(s) to which the enforcement action is related will establish a link between the enforcement record and each violation record matching the specific violation ID. If no links are established (reported violation IDs not found/matched on the data base) the enforcement record will be posted.

**Associated Violation Contaminant Groups (Z5000) - TYPE, CONTAMINANT, Monitoring PERIOD BEGIN DATE (MO, DAY & YR)**

Entering the Arsenic violation type code, the contaminant code and the begin date of the monitoring period begin date will establish a link between the enforcement action and all Arsenic violations which exactly match the enforcement link data. If no matches are found, the enforcement record will be posted.

Refer to the *SDWIS/FED Data Entry Instructions* for more detailed information.

**G. Public Notification**

Systems must provide PN for violations and in certain other circumstances (40 CFR Part 141, Subpart Q). The revised PN Rule (40 CFR Part 141, Subpart Q) is in effect for States and Tribes with Primacy by May 6, 2002, or the date the revised primacy becomes effective, whichever is sooner. The May 2000 PN Rule divides the public notice requirements into three tiers based on the seriousness of the violation or situation<sup>10</sup>. “Tier 1” applies to violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure. Notice is required within 24 hours of the violation. “Tier 2” applies to other violations and situations with potential to have serious adverse effects on human health. Notice is required within 30 days. Primacy agencies may grant extensions of up to three months for the initial notice under certain conditions. “Tier 3” applies to monitoring and testing violations not included in Tier 1 and Tier 2, operation under a variance or exemption, availability of unregulated contaminant monitoring results, and exceedance of the fluoride secondary MCL. Notices for Tier 3 violations can be combined into one annual notice, including the consumer confidence report (CCR), if timing and delivery requirements can be met.

The Arsenic Rule requires CWSs and NTNCWSs to provide a Tier 2 public notice for an arsenic MCL violation and to provide a Tier 3 public notice for a violation of the arsenic monitoring and testing procedure requirements (40 CFR Part 141, Subpart Q, Appendix A).

After providing notice to consumers, the water system must send the primacy agency a copy of each type of public notice (e.g., newspaper, radio, mail notices, etc.) along with a letter certifying that the system has met all of the PN requirements. The system must send this information to the State within 10 days of completion of each public notice (40 CFR 141.31(d)).

**H. Significant Noncompliance**

EPA's Office of Enforcement and Compliance Assurance (OECA) is in the process of developing new guidance in an effort to update its significant noncompliance definitions. However, at this

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<sup>10</sup>For Direct Implementation programs, the revised PN Rule went into effect October 31, 2000.

time, EPA will use the following definition to remain consistent with the Radionuclides Rule and OECA's draft guidance.

A system is characterized as a significant noncomplier (SNC) if it has a monitoring result twice the MCL, which for arsenic would be 0.02 mg/L (20 µg/L).

A system monitoring more frequently than once a year is characterized as a SNC if it fails to monitor or report analytical results for arsenic for two consecutive monitoring periods. A system monitoring once a year or less is characterized as a SNC if it fails to monitor or report the analytical results for arsenic in one monitoring period.

Refer to the *SDWIS/FED Data Entry Instructions* and the *SDWIS/FED Significant Non-Compliance Specifications* for more detailed information.

III. SDWIS/FED Data Transmittal

The Data Transfer File (DTF) is the only format by which data can be entered into the SDWIS/FED data base.

Each Data Transfer File record is 80 characters in length and has the following format:

Definition	Positions	Example
Form ID	1 - 2	D1
Qualifier 1	3 - 11	PWS-ID
Qualifier 2	12 - 18	VIOLATION-ID
Qualifier 3	19 - 25	
Action Code	26	D, I, or M*
Data Element Number	27 - 31	Cnnnn
Data Value	32 - 71	
Reserved for SDWIS/FED	72 - 74	
Batch Sequence Number	75 - 80	NNNNNN**

\* D = DELETE, I = INSERT, and M = MODIFY

\*\* A format of MMDDYY is highly recommended

FORM ID	DATA ADDRESS QUALIFIERS	ACT. CODE	DATA ELEM. NUM.	DATA VALUE	N/A	Batch Sequence Number
	QUAL 1 QUAL 2 QUAL 3					
1-2	3-11 12-18 19-25	26	27-31	32-71	72-74	75-80

Table 4 presents the SDWIS/FED violation record data elements for reporting Arsenic Rule violations.

Table 4. SDWIS/FED DTF C1100 - Violation Record Data Elements			
DTF Number	Format	Description	Permissible Values
C101	Character 9	PWS ID	Must be included within SDWIS/FED inventory
C1101	Character 7	Violation ID	Characters 1 & 2 must be the Federal fiscal year in which the violation took place
C1103	Character 4	Contaminant Code	1005 - Arsenic
C1105	Character 2	Violation Type Code	02-MCL, Average 03-M/R 08-Variance/Exemption
C1107	Date 8 (YYYYMMDD)	Monitoring Period Begin Date	Date monitoring period begins
C1109	Date 8 (YYYYMMDD)	Monitoring Period End Date	Date monitoring period ends
C1123	Decimal 6.9	Analysis Result	Required for MCL violations only; Must be $\geq 0$ ; Rounded to 0.001 mg/L

#### IV. Sources for Additional Information

Additional technical information on SDWIS/FED reporting information can be obtained by contacting Valerie Love-Smith of the Infrastructure Program, Drinking Water Protection Division, Office of Ground Water and Drinking Water at (202)-564-6430, or from the following resources:

*Arsenic and Clarifications to Compliance and New Source Monitoring Rule, January 22, 2001.*  
*EPA-815-Z-01-001.*

*Draft Implementation Guidance for Arsenic, EPA-816-D-01-002, November 2001.*

*Final State Implementation Guidance for the Public Notification Rule, EPA-816-R-01-010, October 2001.*

*Arsenic and Clarifications to Compliance and New Source Monitoring Rule: A Quick Reference Guide. EPA-816-F-01-004. January 2001.*

*Technical Fact Sheet: Final Rule for Arsenic in Drinking Water, EPA-815-F-00-016, January 2001*

*Revised Consolidated Summary of State Reporting Requirements for the Safe Drinking Water Information System (SDWIS)*

*SDWIS/FED Data Entry Instructions*

*SDWIS/FED Online Data Dictionary*

*SDWIS/FED Significant Non-Compliance Specifications, March 7, 1997*

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## State Reporting Guidance for the Arsenic Rule

### Appendix A

#### Monitoring, Reporting, and Compliance Determination Examples

**Example 1. "Major" M/R Violation**

A ground water (GW) system MD5234590 with 1 sample point is to collect a sample of arsenic during the 2008-2010 compliance cycle. Its January of 2011 and the system has not sampled for arsenic. The system is not in compliance and would therefore be required to begin collecting quarterly samples of arsenic during the January through December 2011 timeframe.

**Violation Determination:**

The PWS failed to collect an arsenic sample during the monitoring period of 1/01/08 to 12/31/10. M/R violations are to be reported using the Major & Minor severity indicators. A Major M/R violation is defined as "no" samples were collected/reported during the monitoring period. A Minor M/R violation is defined as "some, but not all" samples were collected/reported during the monitoring period. In this example the system failed to collect any arsenic samples during the monitoring period and would therefore receive a Major M/R violation.

The state, reporting at the system level, would report the following violation information:

1- Arsenic Major M/R Violation incurred during the 36-month monitoring period of (1/1/08 - 12/31/10)

Example 1 - SDWIS/FED DTF - M/R Violation Record		
C1101	1155111	Violation Id
C1103	1005	Contaminant Code
C1105	03	Violation Type Code
C1107	20080101	Monitoring Period Begin Date
C1109	20101231	Monitoring Period End Date
C1131	Y	Major Violation Indicator

The DTF transactions for this violation are:

Example 1 - SDWIS/FED DTF Transactions					
Columns	Columns	Columns	Columns	Columns	Columns
D1	MD5234590	1155111		IC1103	1005
D1	MD5234590	1155111		IC1105	03
D1	MD5234590	1155111		IC1107	20080101
D1	MD5234590	1155111		IC1109	20101231
D1	MD5234590	1155111		IC1131	Y

**Example 2. MCL Average Violation**

On July 17, 2008, GW system MD5234590, with 1 sample site, collects its 3-year compliance sample. The analysis result of 0.013 mg/L exceeds the MCL of 0.010 mg/L. The system must begin collecting its quarterly samples of arsenic during the quarter spanning September through December.

Example 2 - Arsenic Monitoring Results					
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
	7/17/08	10/12/08	1/23/09	4/07/09	Average
Arsenic	0.013 mg/L	0.014 mg/L	0.014 mg/L	0.013 mg/L	0.012 mg/L

Violation Determination:

The running annual average for compliance determination is 0.0135 mg/L. An arsenic MCL average violation has occurred and must be reported to SDWIS/FED, rounded to the nearest 0.001 mg/L (1 ppb). (For purposes of rounding, the last digit should be increased by one unit if the digit dropped is 5 or greater. If the digit dropped is 4 or less, do not alter the preceding number.) After rounding, the annual average arsenic analysis result of 0.014 mg/L, incurred during qtr 4 (4/1/09 - 6/30/09), will be reported to SDWIS/FED.

Example 2 - SDWIS/FED DTF - MCL Violation Record		
C1101	0955333	Violation Id
C1103	1005	Contaminant Code
C1105	02	Violation Type Code
C1107	20090401	Monitoring Period Begin Date
C1109	20090630	Monitoring Period End Date
C1123	0.014	Analysis Result

The DTF transactions for this violation are:

Example 2 - SDWIS/FED DTF Transactions					
Columns	Columns	Columns	Columns	Columns	Columns
D1	MD5234590	0955333		IC1103	1005
D1	MD5234590	0955333		IC1105	02
D1	MD5234590	0955333		IC1107	20090401
D1	MD5234590	0955333		IC1109	20090630
D1	MD5234590	0955333		IC1123	0.014

**Example 3. MCL Average Violations at Multiple Entry Points**

A surface water (SW) system has 2 sample sites (source/entity id #98775 and #98766). On September 3, 2007, the system samples for arsenic at each of its two sample sites.

September 3, 2007 Sample Results:

Arsenic (sample site #98775) = 0.013 mg/L

Arsenic (sample site #98766) = 0.011 mg/L

Example 3 - Arsenic Monitoring Results					
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
	9/3/06	12/19/06	3/07/07	6/16/07	Average
sample site #98775	0.013 mg/L	0.014 mg/L	0.013 mg/L	0.014 mg/L	0.014 mg/L
sample site #98766	0.011 mg/L	0.012 mg/L	0.011 mg/L	0.013 mg/L	0.012 mg/L

Reporting Violations:

1 - 4<sup>th</sup> quarter Arsenic MCL Average Violation of 0.014 mg/L at sample site #98775

(Even though both entry points had Average MCL violations for arsenic during the same monitoring period, the State only has to report the highest concentration for each contaminant for each monitoring period.)

The DTF transactions for this violation are:

Example 3 - SDWIS/FED DTF Transactions					
Columns 1-2	Columns 3-11	Columns 12-18	Columns 19-25	Columns 26-31	Columns 32-71
D1	MD5612950	0755444		IC1103	1005
D1	MD5612950	0755444		IC1105	02
D1	MD5612950	0755444		IC1107	20070401
D1	MD5612950	0755444		IC1109	20070630
D1	MD5612950	0755444		IC1123	0.014

**Example 4. M/R Violation Determination at Multiple Entry Points**

The hypothetical contaminant is the same

The MCL is 0.01 mg/L (reported to the nearest 0.001 mg/L)

The samples are taken from three different sample points within the PWS

A Major M/R violation is defined as “no” samples were collected/reported during the monitoring period.

A Minor M/R violation is defined as “some, but not all” samples were collected/reported during the monitoring period.

Example 4 - Monitoring Results				
	Monitoring Period	EP-1	EP-2	EP-3
Quarter 1	7/1/08 - 9/30/08	sampled	sampled	sampled
Quarter 2	10/1/08 - 12/31/08	no sampling	no sampling	no sampling
Quarter 3	1/1/09 - 3/31/09	sampled	no sampling	no sampling
Quarter 4	4/1/09 - 6/30/09	sampled	sampled	no sampling
Quarter 5	7/1/09 - 9/30/09	sampled	sampled	sampled
Quarter 6	10/1/09 - 12/31/09	N/A	sampled	sampled
Quarter 7	1/1/10 - 3/31/10	N/A	N/A	sampled
Quarter 8	4/1/10 - 6/30/10	N/A	N/A	N/A

Note: Monitoring is completed at EP-1 by the end of the 5<sup>th</sup> quarter, at EP-2 by the end of the 6<sup>th</sup> quarter, and at EP-3 by the end of the 7<sup>th</sup> quarter.

Reporting violations:

- One “major” violation during quarter 2.
- One “minor” violation during quarter 3.
- One “minor” violation during quarter 4.
- No violations during quarter’s 1, 5, 6, 7, or 8.

Example 4 - SDWIS/FED DTF Transactions					
Columns 1-2	Columns 3-11	Columns 12-18	Columns 19-25	Columns 26-31	Columns 32-71
D1	MD5612950	0955444		IC1103	4000
D1	MD5612950	0955444		IC1105	03
D1	MD5612950	0955444		IC1107	20091001
D1	MD5612950	0955444		IC1109	20091231
D1	MD5612950	0955444		IC1131	Y
D1	MD5612950	0955555		IC1103	4000
D1	MD5612950	0955555		IC1105	03
D1	MD5612950	0955555		IC1107	20090101
D1	MD5612950	0955555		IC1109	20090331
D1	MD5612950	0955555		IC1131	N
D1	MD5612950	0955556		IC1103	4000
D1	MD5612950	0955556		IC1105	03
D1	MD5612950	0955556		IC1107	20090401
D1	MD5612950	0955556		IC1109	20090630
D1	MD5612950	0955556		IC1131	N

### Example 5A. Compliance Determination

A GW community water system (CWS) serving 2,304 people has been in operation since 1995. Since no waivers are allowed under the existing arsenic monitoring requirements, the system has collected arsenic samples for 4 compliance periods (1993-1995, 1996-1998, 1999-2001, 2002-2004) at the entry point to the distribution system (EPTDS). The system only has 1 EPTDS. All arsenic samples were analyzed by EPA Method 200.8 (ICP-MS) with a detection limit of 0.0014 mg/L. The results of the samples ranged from “non-detect” (<0.0014 mg/L) to 0.004 mg/L. The system collected a sample on November 4, 2006 to satisfy the monitoring required during the 2005 - 2007 compliance period:

#### Results:

PWS ID: 5234590

Date: 11/04/06

Arsenic = <0.002 mg/L

#### Monitoring Schedule:

The system may continue to collect 1 sample every three years with the next sample due between 2008 - 2010, or the CWS may apply to the State for a 9 year waiver as early as 2005, based on the grandfathered monitoring data for 1993-2004. Since the method used to analyze the samples was an EPA approved method with detection limits significantly below the revised arsenic MCL of 0.010 mg/L, the State may use three rounds of monitoring to issue the waiver, ending 2010. The system would not be required to monitor during the period 2005-2007 if the State issued the waiver before then. If the State issued a waiver, the system would be required to collect 1 sample during the 9-year compliance cycle from 2008 - 2016.

#### Violations:

The State has no violations to report to SDWIS/FED.

Example 5B. M/R Violation (9-Year)

The State issued the above system a waiver, the system would therefore be required to collect one sample during the period from 2008 - 2016.

Results:

PWSID: MD1011100

Date: 2/09/2017

Arsenic = not sampled

Violations:

The State will report the following violation to SDWIS/FED:

1 - M/R Violation (1/1/08 - 12/31/16)

Example 5B - SDWIS/FED DTF - M/R Violation Record		
C1101	1710001	Violation Id
C1103	1005	Contaminant Code
C1105	03	Violation Type Code
C1107	20080101	Monitoring Period Begin Date
C1109	20161231	Monitoring Period End Date

The DTF Transactions for this violation are:

Example 5B - SDWIS/FED DTF Violation Transactions					
Columns 1-2	Columns 3-11	Columns 12-18	Columns 19-25	Columns 26-31	Columns 32-71
D1	MD1011100	1710001		IC1103	1005
D1	MD1011100	1710001		IC1105	03
D1	MD1011100	1710001		IC1107	20080101
D1	MD1011100	1710001		IC1109	20161231

### Example 6A. Compliance Determination

A SW CWS serving 9,023 people has been in operation since 2003. Since no waivers are allowed under the existing arsenic monitoring requirements, the system has collected annual arsenic samples for 3 years (2003, 2004, 2005) at the entry point to the distribution system (EPTDS). The system only has 1 EPTDS. All arsenic samples were analyzed by EPA Method 200.7 (ICP-AES) with a detection limit of 0.008 mg/L. The results of the samples ranged from “non-detect” (0.008 mg/L) to 0.01 mg/L. The system collected a sample on May 30, 2006 to determine compliance with the revised arsenic MCL (0.01 mg/L). However, the laboratory used EPA Method 200.8 (ICP-MS) to analyze the sample for this round of monitoring because EPA withdrew approval of the less sensitive method 200.7 (ICP-AES).

#### Results:

PWS ID: 4595230

Date: 5/30/06

Arsenic = 0.007 mg/L

#### Monitoring Schedule:

The system must continue to collect 1 sample every year or apply to the State for a 9 year waiver. However, in this case, the data the system analyzed using EPA method 200.7 may not be used to meet the waiver requirements and the system must collect 2 additional annual samples prior to being eligible for a waiver. States may grant a waiver to SW systems provided they have monitored annually for at least three years.

#### Violations:

No violations

Example 6B. MCL Average Violation

The system did not apply for a waiver, the system would therefore be required to collect annual samples during the period from 2007 - 2010.

Results:

PWSID: MD2208557

Date: 4/22/2008

Arsenic = 0.011 mg/L

The system exceeded the MCL for Arsenic and is thereby required to monitor quarterly beginning in the next quarter, until the State determines the results are reliably and consistently below the MCL (i.e., at least four quarterly samples).

Example 6B - Monitoring Results				
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
	4/22/08	8/22/08	12/22/08	2/22/09
Arsenic	0.011 mg/L	0.011 mg/L	0.010 mg/L	0.010 mg/L

Violation Determination:

The State will report the following violation to SDWIS/FED:

1 - MCL Average Violation incurred during the year 4/1/08-3/31/09

Example 6B - SDWIS/FED DTF Violation Transactions					
Columns 1-2	Columns 3-11	Columns 12-18	Columns 19-25	Columns 26-31	Columns 32-71
D1	MD2208557	0927333		IC1103	1005
D1	MD2208557	0927333		IC1105	02
D1	MD2208557	0927333		IC1107	20080401
D1	MD2208557	0927333		IC1109	20090331
D1	MD2208557	0927333		IC1123	0.011

Example 7. MCL Average Violation Determination

The hypothetical contaminant is the same

The MCL is 0.01 mg/L (reported to the nearest 0.001 mg/L)

The samples are taken from three different sample points within the PWS

Example 7 - Monitoring Results				
	Monitoring Period	Result	MCL Violated	Rounded Annual Average
Quarter 1	7/1/08 - 9/30/08	0.009	No	N/A
Quarter 2	10/1/08 - 12/31/08	0.010	No	N/A
Quarter 3	1/1/09 - 3/31/09	0.010	No	N/A
Quarter 4	4/1/09 - 6/30/09	0.015	Yes	0.011
Quarter 5	7/1/09 - 9/30/09	0.005	No	0.010
Quarter 6	10/1/09 - 12/31/09	0.011	Yes	0.010
Quarter 7	1/1/10 - 3/31/10	0.009	No	0.010
Quarter 8	4/1/10 - 6/30/10	0.018	Yes	0.011

Violation Determinations:

- One MCL Average violation during quarter 4.
- One MCL Average violation during quarter 6.
- One MCL Average violation during quarter 8.
- No violations during quarter's 1, 2, 3, 5 or 7.

Example 8. Annual Average Determination

The hypothetical contaminant is the same

The MCL is 0.01 mg/L (reported to the nearest 0.001 mg/L)

The samples are taken from three different sample points within the PWS

Example 8 - Monitoring Results					
	Monitoring Period	M o	Result	MCL Violated	Rounded Annual Average
Quarter 1	7/1/08 - 9/30/08	7	0.042	Yes	0.011*
Quarter 2	10/1/08 - 12/31/08	1	0.012	Yes	0.014*
Quarter 3	1/1/09 - 3/31/09	1	0.009	Yes	0.019*
Quarter 4	4/1/09 - 6/30/09	4	0.007	Yes	0.018
Quarter 5	7/1/09 - 9/30/09	7	0.009	No	0.009
Quarter 6	10/1/09 - 12/31/09	1	0.011	No	0.009
Quarter 7	1/1/10 - 3/31/10	1	0.015	Yes	0.011
Quarter 8	4/1/10 - 6/30/10	4	0.009	Yes	0.011

\* During quarter's 1, 2, and 3, the system had quarterly results that were so great that they caused the system to be in violation before the annual compliance period was complete.<sup>11</sup>

*If reporting violations by system OR sample point:*

- One MCL Average violation during quarter 1.
- One MCL Average violation during quarter 2 .
- One MCL Average violation during quarter 3 .
- One MCL Average violation during quarter 4 .
- One MCL Average violation during quarter 7 .
- One MCL Average violation during quarter 8.
- No violations during quarter's 5, or 6.

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<sup>11</sup>The system is out of compliance immediately, if one sample result causes the running annual average to exceed the MCL as stated in 40 CFR 141.23(i)(i).

Example 9. MCL Average Violations & RTC

PWS #MD1011100 has one sample site  
 The Arsenic MCL is 0.01 mg/L,  
 Arsenic results are to be reported to the nearest 0.001 mg/L

Example 9 - Monitoring Results				
	Monitoring Period	Result	MCL Violated	Rounded Annual Average
Quarter 1	7/1/08 - 9/30/08	0.000	No	N/A*
Quarter 2	10/1/08 - 12/31/08	0.020	No	N/A*
Quarter 3	1/1/09 - 3/31/09	0.025	Yes	0.011*
Quarter 4	4/1/09 - 6/30/09	0.009	Yes	0.014*
Quarter 5	7/1/09 - 9/30/09	0.000	Yes	0.014*
Quarter 6	10/1/09 - 12/31/09	0.009	Yes	0.011*
Quarter 7	1/1/010 - 3/31/10	0.010	No	0.007*
Quarter 8	4/1/10 - 6/30/10	0.010	No	0.007*
Quarter 9	7/1/10 - 9/30/10	0.010	No	0.010
Quarter 10	10/1/10 - 12/31/10	0.009	No	0.010

\*Values of zero are used when the result is less than the detection limit.<sup>12</sup>

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<sup>12</sup>If a monitoring result is less than the detection limit, zero will be used to calculate the annual average as stated in 40 CFR 141.24(f)(15)(v).

Example 9 - SDWIS/FED DTF Violation Transactions					
Columns 1-2	Columns 3-11	Columns 12-18	Columns 19-25	Columns 26-31	Columns 32-71
D1	MD1011100	0910001		IC1103	1005
D1	MD1011100	0910001		IC1105	02
D1	MD1011100	0910001		IC1107	20090101
D1	MD1011100	0910001		IC1109	20090331
D1	MD1011100	0910001		IC1123	0.011
D1	MD1011100	0910001		IC1103	1005
D1	MD1011100	0910001		IC1105	02
D1	MD1011100	0910001		IC1107	20090401
D1	MD1011100	0910001		IC1109	20090630
D1	MD1011100	0910001		IC1123	0.014
D1	MD1011100	0910001		IC1103	1005
D1	MD1011100	0910001		IC1105	02
D1	MD1011100	0910001		IC1107	20090701
D1	MD1011100	0910003		IC1109	20090930
D1	MD1011100	0910003		IC1123	0.014
D1	MD1011100	1010004		IC1103	1005
D1	MD1011100	1010004		IC1105	02
D1	MD1011100	1010004		IC1107	20091001
D1	MD1011100	1010004		IC1109	20091231
D1	MD1011100	1010004		IC1123	0.011

Quarter 7, 8, 9, and 10 annual averages are below the detection limit, the State determines that the violation has been addressed and returns the PWS to compliance using the preferred Y5000 linking method.

Example 9 - SDWIS/FED DTF RTC Transactions					
E1	MD1011100	1100001		IC1203	20101213
E1	MD1011100	1100001		IC1205	SOX
E1	MD1011100	1100001		IY5000	1010004

Alternatively, the State could have reported the RTC via the Z5000 linking method:

E1	MD1011100	1100001		IC1203	20101213
E1	MD1011100	1100001		IC1205	SOX
E1	MD1011100	1100001		IZ5000	2401020090101

or via the J5000 linking method:

E1	MD1011100	1100001		IC1203	20101213
E1	MD1011100	1100001		IC1205	SFL
E1	MD1011100	1100001		IJ5000	240102009010120101110