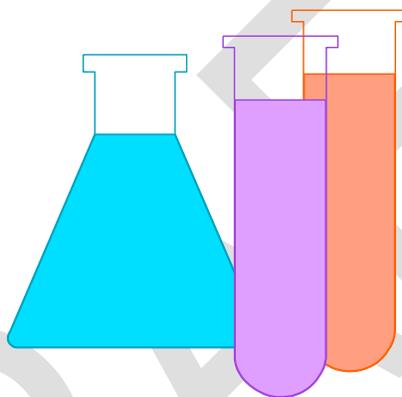


# LABORATORY REPORTING INSTRUCTIONS FOR CHEMICAL CONTAMINANTS IN DRINKING WATER



VOCs  
SOCs  
IOCs  
NITRATE/NITRITE  
ASBESTOS

**Technical Guidance Number  
393-3301-009**



**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**Bureau of Safe Drinking Water**

<b>Document Number:</b>	393-3301-009
<b>Title:</b>	Laboratory Reporting Instructions for Chemical Contaminants in Drinking Water
<b>Authority:</b>	Pennsylvania's Safe Drinking Water Act (35 P.S. § 721.1 <i>et seq.</i> ) and regulations at 25 Pa. Code Chapter 109.
<b>Effective Date:</b>	Upon publication of notice as final in the <i>Pennsylvania Bulletin</i>
<b>Policy:</b>	The Department of Environmental Protection (DEP) provides laboratory directors of accredited laboratories and public water supply personnel with the information necessary to properly report chemical analytical compliance monitoring data under the safe drinking water program.
<b>Purpose:</b>	The purpose of this document is to establish uniform instructions and protocol for implementing the drinking water reporting requirements for chemical analytical data.
<b>Applicability:</b>	This guidance will apply to all certified laboratories and public water systems submitting drinking water chemical analytical data to DEP.
<b>Disclaimer:</b>	<p>The policies and procedures outlined in this document are intended to supplement existing requirements. Nothing in the policies and procedures shall affect regulatory requirements.</p> <p>The policies and procedures herein are not an adjudication or a regulation. DEP does not intend to give this guidance that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.</p>
<b>Page Length:</b>	50 pages
<b>Definitions:</b>	See Title 25 <i>Pa. Code</i> Chapter 109

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## SECTION 1: INTRODUCTION

This manual provides instructions for the reporting of drinking water monitoring results for Volatile Synthetic Organic Chemicals (VOCs), Nitrate/Nitrite, Inorganic Chemicals (IOCs), Synthetic Organic Chemicals (SOCs), and Asbestos. The monitoring requirements apply to all community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs). Nitrate/Nitrite monitoring also applies to transient noncommunity water systems (TNCWSs).

The monitoring requirements, for the contaminants covered in this manual, provide public health protection through reduction of chronic risks from cancer, organ damage and circulatory, nervous and reproductive system disorders. They also help protect against acute risks associated with Methemoglobinemia or “blue baby syndrome,” which may be caused from ingestion of elevated levels of nitrate and nitrite.

### **MONITORING AND REPORTING INFORMATION**

Monitoring requirements fall into categories of initial, repeat, increased, reduced or waived monitoring. Monitoring periods follow the Standardized Monitoring Framework – nine-year compliance cycles divided into 3 three-year compliance periods. See Section 5 for detailed monitoring information.

<b>Standardized Monitoring Framework</b>					
9-Year Compliance Cycle 2011-2019			9-Year Compliance Cycle 2020-2028		
1 <sup>st</sup> period 2011-2013	2 <sup>nd</sup> period 2014-2016	3 <sup>rd</sup> period 2017-2019	1 <sup>st</sup> period 2020-2022	2 <sup>nd</sup> period 2023-2025	3 <sup>rd</sup> period 2026-2028

Drinking water analysis results are entered into the *Pennsylvania Drinking Water Information System (PADWIS)* via the *Drinking Water Electronic Laboratory Reporting (DWELR)* System. PADWIS is a computerized data management system used by DEP to track drinking water monitoring results. Accurate and prompt data reporting is essential. An effective surveillance program requires prompt follow-up to MCL, MRDL, treatment technique and monitoring violations for the protection of public health. More instructions about reporting in DWELR are available in Section 3.

DWELR forms (SDWA-4 and SDWA-1) are used to report analytical results electronically. Multiple contaminants from the same entry point (EP) may be reported on the Chemical Analysis SDWA-4 Form. When a single contaminant (like nitrate) from one or more EPs, or of more than one sample type (like nitrate EP sample and nitrate check sample) is being reported, the SDWA-1 form may be used. All sample results can then be reported on the same form. All monitoring is done at each water system EP. Therefore, separate SDWA-4 forms will need to be submitted for each EP of a water system. It is extremely important that the water supplier provide you with both the PWSID and appropriate EP ID number with each sample.

Please read these instructions thoroughly. Failure to monitor, analyze, and/or report analytical results correctly may result in the laboratory and/or water supplier incurring a violation of the Safe Drinking Water Regulations.

The various tables and flowcharts in this technical guidance provide information on codes, monitoring/reporting requirements and MCLs.

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## SECTION 2: RESPONSIBILITIES OF THE LABORATORY

Under the provisions of Title 25 Pa. Code Chapter 109, Safe Drinking Water Regulations, and the authority of the PA Safe Drinking Water Act (SDWA), it is the responsibility of the accredited laboratory to:

1. Submit to DEP, in an electronic format acceptable to DEP, the results of analyses performed by the laboratory under the Safe Drinking Water Regulations using a secure computer application provided by DEP, as per 25 Pa. Code §109.810(a).
  - a) In the event of a DEP computer application failure, DEP will notify the laboratory of an alternate reporting method.
  - b) If a laboratory is unable to submit data electronically, due to circumstances beyond its control, the laboratory shall notify DEP prior to the applicable reporting deadline. If DEP determines that the circumstances were beyond the control of the laboratory, DEP will specify a temporary, alternate reporting method the laboratory shall use to meet the reporting deadline.
2. Report the results within either the first 10 days following the month in which the result is determined or the first 10 days following the end of the required monitoring period as stipulated by DEP, *whichever is shorter*, as per 25 Pa. Code §109.810(a)(1). ***Failure to report on or before the 10<sup>th</sup> day of the following month will result in the water supplier being charged with a violation for failure to monitor.***
3. Notify the public water supplier by telephone within 1 hour of the laboratory's determination of a maximum contaminant level (MCL) violation or that a sample result requires the collection of a check sample. If the supplier cannot be reached within that time, notify DEP by telephone within 2 hours of the determination, as per 25 Pa. Code §109.810(b)(1). If it is necessary to contact DEP after DEP's routine business hours, contact the appropriate regional office's after-hours emergency response number and provide information regarding the occurrence, the name of a contact person and phone number where that individual may be reached in the event further information is needed. If DEP's emergency number cannot be reached, notify the appropriate DEP regional office by telephone within 1 hour of the beginning of the next business day.

The information regarding the PWS shall include, as per 25 Pa. Code §109.810(b)(1)(ii), but is not limited to:

- The PWSID of the water system
- System name
- Contaminant and level detected
- Date, time and location sample was collected
- Date and time sample was analyzed
- Name of accredited laboratory and contact person and phone number

- What steps the laboratory took to contact PWS before calling DEP
4. Notify the local DEP office or County Health Department (CHD) in writing within 24 hours of the determination of a maximum contaminant level (MCL) violation or that a sample result requires the collection of a check sample, as per *25 Pa. Code* §109.810(b)(2). (See Table I, Maximum Contaminant Levels starting on page 18; and the sections starting on page 10 regarding MCL Compliance and check samples.)

Please use DEP document number 3930-FM-BSDW0061, found in eLibrary at <http://www.depgreenport.state.pa.us/elibrary/> and fax to the local DEP or CHD office.

DEP District Office and CHD contact information, by county, can be found by searching for document 3930-FM-BSDW0560 in eLibrary at the following link:  
<http://www.depgreenport.state.pa.us/elibrary/Search>

*With the permission of the district office, the form may be sent via email to the local DEP district office.*

5. Establish and maintain a standard operating procedure to provide the information needed to report a violation or situation listed above to DEP. This procedure should be verified at least annually.
6. Meet these reporting and notification requirements regarding results of analyses performed by the laboratory unless the laboratory has a written contract with another accredited laboratory. The subcontracted laboratory needs to be given all pertinent information to be able to notify DEP, if needed.
7. Notify each affected customer in writing within 72 hours of receiving notice from DEP of a revocation or suspension of accreditation.
8. Maintain information on the personnel who collected and analyzed the samples. If the samples were collected by water system personnel, the laboratory needs retain a copy of the chain of custody, as per *25 Pa. Code* §252.401.
9. Maintain records, including handwritten data, that allow reconstruction of all laboratory activities associated with testing or analysis of environmental samples (i.e., temperature logs, calibration results, standard and reagent prep logs, results of raw data- samples and associated QC samples, calculations, etc.) for a minimum of 5 years, as required under *25 Pa. Code* §109.701 and §252.706. The records need to be complete enough so that assessors can reconstruct the entire analysis and all activities related to generating the final result.

## SECTION 3: ELECTRONIC ASSISTANCE TOOLS

The following electronic assistance tools are available from DEP:

### Subsection A: Drinking Water Electronic Laboratory Reporting (DWELR)

All PWSs and laboratories must use DWELR to report electronically, according to 25 Pa. Code §§109.701(j) and 109.810. DWELR is a DEP GreenPort web application PWSs and accredited laboratories use to upload sample files and/or manually enter sample results on the appropriate entry form. To access DWELR, you need to have a DEP GreenPort user profile. If you do not already have a GreenPort user profile, go to Greenport: [www.depgreenport.state.pa.us](http://www.depgreenport.state.pa.us) and "click here to self-register." Please contact the DEP Greenport Helpdesk at 717-787-HELP, if you need help setting up a user account. The DWELR registration form and instructions are available online at [www.depgreenport.state.pa.us/elibrary/](http://www.depgreenport.state.pa.us/elibrary/). Search "\*DWELR\*." DEP's Bureau of Safe Drinking Water, Pennsylvania Drinking Water Information System (PADWIS) section may be reached at 717-772-4018 or [ra-padwis@pa.gov](mailto:ra-padwis@pa.gov) for more information about DWELR.

DWELR's features allow PWSs or accredited laboratories to:

- Submit data via either upload or data entry.
- Preview the data entered. A DWELR user can *view* all data submitted for the PWS(s) the user represents, regardless of who submitted it, but can only *edit* the data submitted by the user.
- Submit the data *until the 10th (by 11:59pm)* of the month. On the 11<sup>th</sup> of each month, all data is cleared from DWELR and passed to the Pennsylvania Drinking Water Information System (PADWIS) for monthly compliance processing.
- View error reports. Upon submittal, the data is checked and an error report is generated.
- Correct data and resubmit until the 10<sup>th</sup> of the month.

Detailed instructions are contained in the DWELR web application. Those choosing to upload their data can retrieve the data formats from within DWELR. Accredited laboratories are obligated to provide the sample results to their client (PWS). The format used to report these results is a decision to be determined mutually by the laboratory and the client.

DWELR only stores the data temporarily. While the data remains in DWELR, it can be viewed by the submitting lab and the water system. The data is not available to be viewed by other labs or water systems. After midnight on the 10<sup>th</sup> of the month (11<sup>th</sup>), the data is moved from DWELR to PADWIS. Data stored in PADWIS includes drinking water system information, laboratory accreditation information and drinking water sample data.

When a lab submits data, a validation routine is run on the data. This routine includes checks for valid water system and lab ID numbers, analyte and method codes, along with lab accreditation status. Results that are invalid are displayed on the *Error Report* screen. Users should make necessary corrections to the data on this screen and resubmit the records. The routine will be run

every time a user submits or re-submits data. Email notifications will be sent to users if they have any uncorrected errors in their data on the 1<sup>st</sup>, 5<sup>th</sup> and 9<sup>th</sup> of every month. The submitting lab is responsible for making any corrections that are necessary.

On the 11<sup>th</sup> of the month, all data is cleared from DWELR and passed to PADWIS for monthly compliance processing. Sample results, without errors, entered on or before the 10<sup>th</sup> of the month will be included in the current reporting period. Sample results entered on or after the 11<sup>th</sup> will be included in the next reporting period and may result in late reporting violations. After sample results are in PADWIS, they are viewable online through DWRS. Please note: there may be a 2-day lag between when the data are removed from DWELR and when they are available in DWRS.

### **Subsection B: DWRS and Consumer Confidence Reporting System**

DEP provides the following assistance tools found on the DEP website at [www.drinkingwater.state.pa.us](http://www.drinkingwater.state.pa.us):

- ***Drinking Water Reporting System (DWRS)***: Provides dynamic reports on *inventory*, *violations* and *sample* information for water systems from PADWIS. System *monitoring* calendars may also be accessed in DWRS. Instructions on how to use DWRS can be accessed from the DEP Web page.
- ***Consumer Confidence Reporting System***: Provides *detection* and *violation* information from PADWIS to assist community water systems with the preparation of the annual Consumer Confidence Reports.

## **SECTION 4: RESPONSIBILITIES OF THE WATER SUPPLIER**

Under the provisions of Title 25 *Pa. Code* Chapter 109, Safe Drinking Water Regulations, and the authority of the PA SDWA, it is the responsibility of the public water supplier to:

1. Section 109.701(a)(3)(ii) of 25 *Pa. Code* requires reporting to DEP, within 1 hour of notification from the certified laboratory, the sample result that requires the collection of check samples under §109.301.
2. Maintain records of chemical analysis for at least 12 years, as required under 25 *Pa. Code* §109.701(d)(1). The actual laboratory reports may be kept, or data may be transferred to tabular summaries, if the following information is included:
  - i. The date, place and time of sampling and the name of the sample collector.
  - ii. Identification of the sample: EP sample, check sample, raw or special purpose
  - iii. Date of analysis
  - iv. The laboratory, certification number and person responsible for performing analysis.
  - v. The analytical technique and methods used.
  - vi. The results of the analysis.
3. Report to DEP, within 1 hour of discovery that a primary MCL has been exceeded, as per 25 *Pa. Code* §109.701(a)(3)(i).
4. Provide appropriate Public Notice (Tier 1 or Tier 2) for MCL exceedance within the required timeframe, per 25 *Pa. Code* §109.407. See Table I, on page 18 for MCL levels.

**SECTION 5: INFORMATION ABOUT MONITORING REQUIREMENTS AND REPORTING**

In accordance with 25 Pa. Code §109.303(a)(4), samples for determining compliance for IOCs, VOCs, SOCs, Nitrate/Nitrite and Asbestos must be taken at each entry point to the distribution system which is representative of each source after an application of treatment during periods of normal operating conditions. If a system draws water from more than one source and sources are combined prior to distribution, the system shall sample at the entry point during periods of normal operating conditions when water is representative of all sources being used.

Asbestos sampling is also required in the distribution system. As per 25 Pa. Code §109.301(7)(i)(B), at least one sample shall be taken at a representative location within the distribution system, as identified in the Asbestos sample siting plan that includes a materials evaluation.

Monitoring requirements fall into categories of initial, repeat, increased, reduced or waived monitoring. Monitoring periods follow the Standardized Monitoring Framework – nine-year compliance cycles divided into 3 three-year compliance periods. The following table outlines initial monitoring requirements and reduced monitoring.

Contaminant	Initial monitoring	Reduced Monitoring
VOCs	Quarterly, starting with first full quarter EP serves public	After 4 quarters with no detects, annual monitoring for 2 years with no detects, then triennial
SOCs	Quarterly, starting with first full quarter EP serves public	After 4 quarters with no detects, triennial
IOCs	Annual- surface water -starting during year EP serves public	Reduced is only with a waiver, to 1 sample per 9-year cycle
	Triennial- groundwater or GUDI- starting with compliance period after EP serves the public	Reduced is only with a waiver, to 1 sample per 9-year cycle
Nitrate/Nitrite	Quarterly- surface water	After 4 quarters < 50% MCL, annual
	Annual- groundwater or GUDI	N/A
Asbestos (EP & Distribution)	First compliance period after EP serves the public (first 3 yrs of 9 yr cycle)	N/A

**Standardized Monitoring Framework**

Standardized Monitoring Framework					
9-Year Compliance Cycle 2011-2019			9-Year Compliance Cycle 2020-2028		
1 <sup>st</sup> period 2011-2013	2 <sup>nd</sup> period 2014-2016	3 <sup>rd</sup> period 2017-2019	1 <sup>st</sup> period 2020-2022	2 <sup>nd</sup> period 2023-2025	3 <sup>rd</sup> period 2026-2028

DEP designated which year within a 3-year period or a 9-year cycle that a PWS conducts monitoring.

Monitoring Compliance periods	When monitoring is expected	
Triennial (3-year)	2017-2019, 2020-2022, ...	
9-year	2011-2019, 2020-2028, ...	
Annual	By December 31 <sup>st</sup> each year *	
Quarterly	1 <sup>st</sup> Quarter	January 1 <sup>st</sup> – March 31 <sup>st</sup>
	2 <sup>nd</sup> Quarter	April 1 <sup>st</sup> – June 30 <sup>th</sup>
	3 <sup>rd</sup> Quarter	July 1 <sup>st</sup> – September 30 <sup>th</sup>
	4 <sup>th</sup> Quarter	October 1 <sup>st</sup> - December 31 <sup>st</sup>

\* DEP may specify, however, a specific quarter during the year during which a water supplier should monitor.

**Triennial (3-year)** monitoring means samples are collected every 3 years. The year which sampling is conducted is dependent upon the year in which the PWS conducted initial monitoring for the contaminant group; and the due date is always December 31 of the year. For example, groundwater entry point IOC monitoring on a 3-year schedule is due December 31 of the second year of each standard monitoring framework 3-year compliance period; 2018, 2021, 2024, etc.

All PWSs having groundwater EPs, which have been granted reduced VOC monitoring to a 3-year monitoring schedule, monitor VOCs at those EPs by December 31 of every 3-year increment following the year in which the PWS conducted initial monitoring as follows:

Initial VOC Monitoring Year	3-Year Repeat Monitoring Due
2011 (year 1)	2017, 2020, 2023, 2026, 2029, 2032...
2012 (year 2)	2018, 2021, 2024, 2027, 2030, 2033...
2013 (year 3)	2019, 2022, 2025, 2028, 2031, 2034...

**9-year** monitoring means samples are collected during each standard monitoring framework 9-year compliance cycle. However, monitoring may be due at the end of a specific 3-year compliance period within a compliance cycle. For example, monitoring for asbestos is due anytime during the first 3-year period of a 9-year cycle (i.e. 2020-2022, 2029-2031...). If a monitoring waiver (see monitoring waivers below) is issued for an IOC, monitoring for that IOC is reduced to once during each 9-year compliance cycle, and is conducted during the second year of the first 3-year period of each 9-year cycle (i.e. 2021, 2030...).

**Monitoring Waivers** for VOCs, SOCs or IOCs may be granted by DEP on an entry point-by-entry point, contaminant-specific basis. Waivers of sampling requirements are based upon a vulnerability assessment (Use Waiver or Susceptibility Waiver). Waivers are effective for a specific period (e.g., 3 or 9 years) and must be renewed for the waiver to continue, as per 25 Pa. Code §109.301.

The following table summarizes what waivers mean in Pennsylvania:

Type of Contaminant	Waiver Type	Monitoring as Result of Waiver	Renewal frequency
Nitrate/Nitrite	No waivers allowed		
VOCs (GW/GUDI EPs only w/ previous detect)	Use	Triennial	3 years
SOCs	Use or Susceptibility	No monitoring required	3 years
IOCs	9-year	1 sample/ 9-year cycle	9 years
Asbestos (EP)	Susceptibility	No monitoring required	9 years
Asbestos (Distribution)	Susceptibility	No monitoring required	9 years

**Check samples** (also known as Confirmation Samples) are required whenever a routine EP exceeds the MCL as follows:

Contaminant	When do you need checks?	When checks are to be taken
Nitrate Nitrite	>10.4 mg/L >1.4 mg/L	Within 24 hrs of notification of initial sample >MCL.
IOCs, VOCs, SOCs, Asbestos	If on annual or less frequency, > MCL	ASAP, but within 2 weeks of notification of initial sample > MCL.

**MCL compliance** at each EP is determined as follows:

Contaminant	MCL Compliance based on
Nitrate/Nitrite	Average of the results of the initial routine EP sample which exceeded the MCL value and the check sample. If a check sample is not taken, then compliance is based on the routine EP sample result alone.
VOCs/SOCs/IOCs or Asbestos	<u>If frequency is annual or less:</u> If original sample exceeds MCL value, take a check sample within 2 weeks. Compliance is based on the average the two results. If a check sample is not taken, then compliance is based on the routine EP sample result alone.
	<u>If frequency is quarterly:</u> Compliance is based on the running annual average of quarterly results.  Note: If more than one sample is obtained from an EP for a contaminant during a quarter, all sample results are averaged to yield the result for that quarter. To determine if a value exceeds the MCL, round to the least significant digit of the MCL.

### Monitoring after a Detect or MCL exceedance (and NO Treatment is installed)

Type of Contaminant	Detect or MCL exceedance	Monitoring frequency
Nitrate/Nitrite	> 4.4 mg/L/ > 0.4 mg/L OR MCL exceedance (>10.4 mg/L / > 1.4mg/L)	Quarterly, until qualify for reduced
VOCs	Detect or MCL exceedance	ALL VOCs monitored 4 quarters, until R&C below the MCL to qualify for annual monitoring.
SOCs	Detect or MCL exceedance	SOC detected/exceeding MCL ONLY: 4 quarters R&C below MCL to qualify for annual monitoring
IOCs	MCL exceedance	IOC exceeding MCL ONLY: 4 quarters R&C below MCL to return to previous monitoring frequency
Asbestos	MCL exceedance	4 quarters R&C below MCL to return to previous monitoring frequency

Reliably and consistently (R&C) below MCL means < 80% MCL

### Monitoring when treatment has been installed for a contaminant

Specific monitoring requirements may vary based on type of treatment installed and will be listed in the special conditions of the operation permit, but generically, quarterly performance monitoring is required in addition to the annual compliance monitoring.

### Compositing of samples

Composite sampling is actually composite analysis. In accordance with 40 CFR 141.23(a)(4), 141.24(f)(14) and 141.24(h)(10), compositing of samples is to be done in the laboratory by special procedures. Samples must be composited at the accredited laboratory that is going to perform the analysis. Samples may not be composited and then shipped to another laboratory. For further information on laboratory compositing procedures, contact the DEP Bureau of Laboratories, Laboratory Certification Section.

1. To help lower the cost of sampling, public water systems may composite up to five (5) samples.
  - a) If the population is greater than 3,300, then compositing may only be done at sampling points within a single system.
  - b) If the population is less than or equal to 3,300, then samples may be composited among different systems provided the 5-sample limit in maintained.

2. Compositing may only be used when the detection limit of the method used for analysis is less than one-fifth (1/5) of the MCL.
3. Samples from groundwater EPs may not be composited with samples from surface water EPs. Samples from one type of bottled or vended water product may not be composited with samples from another type of bottled or vended water product.
4. An EP which contains water treated to meet a specific contaminant MCL may not be included in a composite sample which is being analyzed for that contaminant.
5. If a VOC or SOC contaminant is detected at an EP, samples from that EP may not be composited for subsequent or repeat monitoring requirements.
6. Samples used in compositing shall be collected in duplicate.
7. The analysis must be done within 14 days of sample collection. (If samples are collected on different days, the hold time begins with the first sample collected.)
8. If the concentration in the composite sample triggers follow-up analysis, then duplicates of the original samples from all EPs included in the composite must be analyzed and reported within 14 days of the original sample collection date and before the end of the monitoring period.
9. Follow-up analysis of samples from each individual entry point included in the composite is triggered as follows:

<b>Contaminant</b>	<b>If the concentration in the composite sample is:</b>
VOCs	Greater than or equal to 0.0005 mg/l for any VOC, then follow-up analysis must be done for all VOCs.
SOCs	Greater than or equal to the Detection Limit, then follow-up analysis must be done for the SOC's which were detected.
IOC's Nitrate/Nitrite Asbestos	Greater than or equal to 1/5 the MCL, then follow-up analysis must be done for the contaminants which were equal to or greater than 1/5 of the MCL.

10. If the composite analysis triggers follow-up analysis, then the results of each follow-up analysis must be reported separately as if composite monitoring never occurred. Thus, composite analysis serves as a screening procedure.

11. If the composite analysis does not trigger any follow-up analysis, the laboratory must submit a separate SDWA-4 form for each EP included in the composite sample, showing the results of the composite analysis.

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# Safe Drinking Water Act



## SDWA 4 - INORGANIC / ORGANIC CHEMICAL AND RADIOLOGICAL ANALYSIS

SDWA-4															
Current Lab Certifications					Contaminants not Requiring Certification										
	PWSID	PWS Name	Contam ID	Analysis Method	Result	Lower Limit of Detection	Counting Error	Analysis Date	Loc/EP ID	Loc/EP ID 2	Sample Date	Sample Type	Sample Time	Lab ID	Sample ID
Copy Previous															

Excel upload format:

<b>Template for SDWA4 Form Data</b> Row1, column names, should remain as provided. If you create your own spreadsheet file, the first row must be <i>exactly</i> as shown here, and all cells must be formatted as "text". Row2, data formats, should be overwritten with data, or deleted.														
PWSID	ContamCode	Method	Result	LLD	CE	Anal_Date	Location	Location 2	Samp_Date	Samp_Type	Samptime	Lab_ID	SampleID	
1234567	4000	401	1.111	0.11	0.11	110303	111	001	110303	E	1215	12345	111111	

**SDWA-4 Form Instructions for reporting Inorganic/Organic Chemical  
and Radiological Analysis**

<b>DATA FIELD</b>	<b>EXPLANATION</b>
<b>PWS ID</b>	Enter the public water system ID number to which these samples apply. Failure to enter the PWS ID will result in the water supplier not receiving credit for conducting the monitoring. If you do not know the PWS ID number, and the PWS cannot provide it to you, contact the local DEP or CHD office or check DWRS.
<b>CONTAMINANT ID</b>	Enter the contaminant ID code for the parameter being reported. Acceptable contaminant codes are shown on Table I.  Note: If VOCs are being reported, and none of the VOCs are detected, you may indicate this by entering a single "group contaminant code" of VOC1.
<b>ANALYSIS METHOD</b>	Enter the 3-digit code of the approved analysis method used to analyze the samples. Acceptable analysis method codes are shown on Table II.
<b>RESULT</b>	Enter the result of each sample analyzed to at least one decimal place beyond the MCL value. Include the decimal point within the number.  Report all results in MILLIGRAMS PER LITER (mg/L) only (except asbestos, reported in MFL). If any result is less than its respective EPA-specified detection limit (DL), enter zero.
<b>LOWER LIMIT OF DETECTION (LLD)</b>	Report LLD for radiological analysis only. See DEP document 383-3301-205 for Rad Reporting instructions.
<b>COUNTING ERROR (CE)</b>	Report CE for radiological analysis only. See DEP document 383-3301-205 for Rad Reporting instructions.
<b>ANALYSIS DATE</b>	Enter the date (MMDDYY) on which the analysis was performed or if the analysis spanned more than one day, the date on which the analysis is complete and result obtained.
<b>LOCATION/ENTRY POINT ID</b>	Enter the unique 3-digit Entry Point ID number assigned to the sampling point by the local DEP or CHD office. If the water supplier has not provided this ID number to you, then contact the water supplier or the local DEP or CHD office. Entry Point ID numbers always begin with "1" (e.g., 100, 102, 103, . . .). For asbestos distribution system (D) samples, the 3-digit code should be identified in a sample siting plan.
<b>LOCATION 2</b>	Enter the source ID and name or enter MIX in the ID, if a blend of sources.
<b>SAMPLE DATE</b>	Enter the date (MMDDYY) on which the sample was collected.

**SDWA-4 Form Instructions for reporting Inorganic/Organic Chemical  
and Radiological Analysis (cont.)**

<b>DATA FIELD</b>	<b>EXPLANATION</b>
<b>SAMPLE TYPE</b>	<p>Enter the appropriate letter code which corresponds to the type of sample collected:</p> <p><b>E</b> (Entry Point) - Routine samples which the PWS has taken at an Entry Point to its distribution system. This is the code which should be used for the reporting of all routine chemical monitoring results.</p> <p><b>D</b> (Distribution)- Only valid for routine asbestos samples taken in the distribution system. The 3-digit code used should match the sample site plan.</p> <p><b>C</b> (Check Sample or Confirmation Sample) - Follow-up samples taken in response to routine or initial samples which are detected at a level exceeding the MCL. See Section 5 for when check samples are required.</p> <p><b>R</b> (Raw Water) - A supplier may wish to collect and have analyzed, samples of raw water to meet a particular need, such as new source sampling. Such samples will not be credited toward routine monitoring requirements.</p> <p><b>S</b> (Special Sample) - A supplier may wish to collect and have analyzed special samples to meet his own need or may be required by DEP or a CHD to take samples to fulfill a special requirement. For example, a PWS may be asked to take delinquent samples after a monitoring period has ended. Such samples are coded "S" to distinguish them from other routine "E" sampling which may be occurring during the same time.</p> <p>Note: Failure to report "E" samples and "C" samples with the correct codes may result in the water supplier receiving a violation for failure to conduct the required monitoring.</p>
<b>SAMPLE TIME</b>	Enter the time the sample was collected. Enter sample times in Military Time (e.g., enter 1:30 pm as 1330).
<b>LAB ID</b>	Enter the 5-digit PA Certification Identification Code Number assigned to the laboratory that conducted the analysis.
<b>SAMPLE ID</b>	(Optional) Enter the unique laboratory sample identification

## Instructions for SDWA Correction Forms

The SDWA correction form is for the correction of previously submitted data no longer in DWELR. Omitted sample results and summary forms that were not previously reported should be submitted through DWELR.

The two permitted methods to correct previously submitted data are as follows:

- 1) A copy of a DWELR printed report of the original submission may be used for corrections. If using a DWELR printout, strikeout the incorrect information and write the correct information on the report. Initial and date the correction. (Note: Do not strikeout the incorrect information heavily so that the original information cannot be read or faxed. Do not use a highlighter on forms to be faxed or copied.)

Include the following information, which can be handwritten on the form:

- The reason for the correction.
- The name of the laboratory, the authorizing personnel and the date of the corrected submission.

- 2) To download the SDWA Correction forms, click on the link in the DEP e-library at [www.depgreenport.state.pa.us/elibrary/](http://www.depgreenport.state.pa.us/elibrary/). Search for 'SDWA Corrections'. Enter all the correct information as it should have been submitted. In the 'Submitted' sections, only the incorrect information should be entered. This information is required to identify the record.

Distribute SDWA corrections forms as follows:

ORIGINAL COPY: Send a copy to DEP's central office at the following mailing or direct carrier service (UPS, Fed Ex) address.

USPS  
**PA DEP SDWA MONITORING DATA**  
**10<sup>th</sup> FLOOR RCSOB**  
**PO BOX 8467**  
**HARRISBURG PA 17105-8467**

UPS or Fed Ex  
**PA DEP SDWA MONITORING DATA**  
**10<sup>TH</sup> FLOOR RCSOB**  
**400 MARKET STREET**  
**HARRISBURG PA 17101**

Corrections may be submitted by fax if requested by DEP Safe Drinking Water central office or field personnel. Obtain the fax number directly from them. Only upon specific request by DEP field personnel should corrections be sent directly to the field office instead of the central office. In this case, a copy does not need to be sent to central office.

SECOND COPY: Send a copy to the water supplier.

THIRD COPY: Retain a copy for the laboratory's records.

**Table I: Contaminant Codes, MCLs & Detection Limits**

<b>Contaminant Name</b>	<b>Contaminant Code</b>	<b>MCL (mg/L)</b>	<b>Method Detection Limit</b>
<b><u>IOCs GROUP:</u></b>			
Antimony	1074	0.006	Dependent upon
Arsenic	1005	0.01	method used
Barium	1010	2	”
Beryllium	1075	0.004	“
Cadmium	1015	0.005	“
Chromium	1020	0.1	“
Cyanide (free)	1024	0.2	“
Fluoride	1025	2.0	“
Mercury	1035	0.002	“
Nickel	1036	0.1 (Remanded 6/29/95)	“
Selenium	1045	0.05	“
Thallium	1085	0.002	“
<b><u>OTHER INORGANIC CHEM.:</u></b>			
Asbestos	1094	7 MFL	0.01 MFL
Nitrate	1040	10	Dependent upon
Nitrite	1041	1	method used
Nitrate + Nitrite		10	“
<b><u>VOCs:</u></b>			
Benzene	2990	0.005	0.0005
Carbon Tetrachloride	2982	0.005	“
1,2-Dichloroethane	2980	0.005	“
o-Dichlorobenzene	2968	0.6	“
para-Dichlorobenzene	2969	0.075	“
1,1-Dichloroethylene	2977	0.007	“
cis-1,2-Dichloroethylene	2380	0.07	“
trans-1,2-Dichloroethylene	2979	0.1	“
Dichloromethane	2964	0.005	“
1,2-Dichloropropane	2983	0.005	“
Ethylbenzene	2992	0.7	“
Monochlorobenzene	2989	0.1	“
Styrene	2996	0.1	“
Tetrachloroethylene	2987	0.005	“
Toluene	2991	1	“
1,2,4-Trichlorobenzene	2378	0.07	“
1,1,1-Trichloroethane	2981	0.20	“
1,1,2-Trichloroethane	2985	0.005	“
Trichloroethylene	2984	0.005	“
Vinyl Chloride	2976	0.002	“
Xylenes (total)	2955	10	“

**Table I: Contaminant Codes, MCLs & Detection Limits**

<b>Contaminant Name</b>	<b>Contaminant Code</b>	<b>MCL (mg/L)</b>	<b>Method Detection Limit</b>
<b><u>SOCs:</u></b>			
Alachlor	2051	0.002	0.0002
Atrazine	2050	0.003	0.0001
Benzo(a)pyrene	2306	0.0002	0.00002
Carbofuran	2046	0.04	0.0009
Chlordane	2959	0.002	0.0002
2,4-D	2105	0.07	0.0001
Dalapon	2031	0.2	0.001
Di (2-ethylhexyl) adipate	2035	0.4	0.0006
Di (2-ethylhexyl) phthalate	2039	0.006	0.0006
Dibromochloropropane (DBCP)	2931	0.0002	0.00002
Dinoseb	2041	0.007	0.0002
Diquat	2032	0.02	0.0004
Endothall	2033	0.1	0.009
Endrin	2005	0.002	0.00001
Ethylene dibromide (EDB)	2946	0.00005	0.00001
Glyphosate	2034	0.7	0.006
Heptachlor	2065	0.0004	0.00004
Heptachlor epoxide	2067	0.0002	0.00002
Hexachlorobenzene	2274	0.001	0.0001
Hexachlorocyclopentadiene	2042	0.05	0.0001
Lindane	2010	0.0002	0.00002
Methoxychlor	2015	0.04	0.0001
Oxymal (Vydate)	2036	0.2	0.002
PCBs	2383	0.0005	0.0001
Pentachlorophenol	2326	0.001	0.00004
Picloram	2040	0.5	0.0001
Simazine	2037	0.004	0.00007
Toxaphene	2020	0.003	0.001
2,3,7,8-TCDD (Dioxin)	2063	3 (x10 <sup>-8</sup> )	0.5 (x10 <sup>-8</sup> )
2,4,5-TP (Silvex)	2110	0.05	0.0002

**Table I: Contaminant Codes, MCLs & Detection Limits**

<b>Contaminant Name</b>	<b>Contaminant Code</b>	<b>MCL (mg/L)</b>	<b>Method Detection Limit</b>
<b><u>SECONDARY CONTAMINANTS:</u></b>			
Aluminum	1002	0.2	Dependent upon
Chloride	1017	250	method used
Color	1905	15 color units	“
Corrosivity	1910	Non-corrosive	“
Foaming Agents	2905	0.5	“
Iron	1028	0.3	“
Manganese	1032	0.05	“
Odor	1920	3 TON	“
pH	1925	6.5-8.5	“
Silver	1050	0.1	“
Sulfate	1055	250	“
TDS (Filterable)	1057	500	“
Zinc	1095	5	“

**TREATMENT TECHNIQUE REQUIREMENTS:**

According to 25 Pa. Code §109.701(d)(7), public water systems which use acrylamide or epichlorohydrin in the water treatment process must keep records concerning their use, including verification that these chemicals were certified for conformance with ANSI/NSF Standard 60 and that the combination (or product) of dose and monomer level did not exceed the following:

Acrylamide = 0.05% dosed at 1 ppm (or equivalent)

Epichlorohydrin = 0.01% dosed at 20 ppm (or equivalent)

**Table II: Acceptable Analysis Method Codes When Reporting to DEP**

<b>Contaminant Name</b>	<b>Contaminant Code</b>	<b>Acceptable Analysis Method Codes</b>
<b><u>IOCs GROUP:</u></b>		
Antimony	1074	125, 126, 170, 171
Arsenic	1005	123, 125, 126, 170, 171
Barium	1010	101, 125, 169, 170, 171
Beryllium	1075	125, 126, 169, 170, 171
Cadmium	1015	125, 126, 169, 170, 171
Chromium	1020	125, 126, 169, 170, 171
Cyanide (free)	1024	181, 182, 183, 184, 185, 186, 187
Fluoride	1025	107, 111, 115, 118, 120
Mercury	1035	103, 119, 170
Nickel	1036	101, 125, 126, 169, 170, 171
Selenium	1045	123, 125, 126, 170, 171
Thallium	1085	126, 170
<b><u>OTHER INORGANIC CHEM:</u></b>		
Asbestos	1094	009
Nitrate	1040	109, 120, 122, 163, 179
Nitrite	1041	109, 120, 163, 168
<b><u>VOCs:</u></b>		
GROUP CODE FOR 20 VOCs	VOC1	217, 221, 224
Benzene	2990	217, 221, 224
Carbon Tetrachloride	2982	211, 217, 221, 224
1,2-Dichloroethane (2CC)	2980	217, 221, 224
o-Dichlorobenzene	2968	217, 221, 224
para-Dichlorobenzene	2969	217, 221, 224
1,1-Dichloroethylene (2CC)	2977	217, 221, 224
cis-1,2-Dichloroethylene (2CC)	2380	217, 221, 224
trans-1,2-Dichloroethylene (2CC)	2979	217, 221, 224
Dichloromethane	2964	217, 221, 224
1,2-Dichloropropane	2983	217, 221, 224
Ethylbenzene	2992	217, 221, 224
Monochlorobenzene	2989	217, 221, 224
Styrene	2996	217, 221, 224
Tetrachloroethylene (PCE) (2CC)	2987	211, 217, 221, 224
Toluene	2991	217, 221, 224
1,2,4-Trichlorobenzene	2378	217, 221, 224
1,1,1-Trichloroethane (2CC)	2981	211, 217, 221, 224
1,1,2-Trichloroethane (2CC)	2985	211, 217, 221, 224
Trichloroethylene (2CC)	2984	211, 217, 221, 224
<i>Vinyl Chloride</i>	2976	217, 221, 224
Xylenes (total)	2955	217, 221, 224

**Table II: Acceptable Analysis Method Codes When Reporting to DEP**

Contaminant Name	Contaminant Code	Acceptable Analysis Method Codes
<b><u>SOCs:</u></b>		
Alachlor*	2051	200, 211, 222, 225, 227
Atrazine*	2050	200, 211, 222, 225, 227, 228, 230
Benzo(a)pyrene	2306	222, 237, 238
Carbofuran	2046	231
Chlordane	2959	200, 201, 222, 225
2,4-D	2105	203, 205, 245
Dalapon	2031	203, 204, 206
Di (2-ethylhexyl) adipate	2035	222, 226
Di (2-ethylhexyl) phthalate	2039	222, 226
Dibromochloropropane (DBCP)	2931	211, 219, 224
Dinoseb	2041	203, 205, 245
Diquat	2032	235
Endothall	2033	233
Endrin	2005	200, 201, 211, 222, 225
Ethylene dibromide (EDB)	2946	211, 219, 224
Glyphosate	2034	232
Heptachlor	2065	200, 201, 211, 222, 225
Heptachlor epoxide	2067	200, 201, 211, 222, 225
Hexachlorobenzene	2274	200, 201, 211, 222, 225
Hexachlorocyclopentadiene	2042	200, 201, 211, 222, 225
Lindane	2010	200, 201, 211, 222, 225
Methoxychlor	2015	200, 201, 211, 222, 225
Oxymal (Vydate)	2036	231
PCBs	2383	200, 201, 202, 222, 225
Pentachlorophenol	2326	203, 205, 222, 245
Picloram	2040	203, 205, 245
Simazine	2037	200, 211, 222, 225, 227, 228, 230
Toxaphene	2020	200, 201, 222, 225
2,3,7,8-TCDD (Dioxin)	2063	229
2,4,5-TP (Silvex)	2110	203, 205, 245

\* Substitutions of the detector in 225, 227, 200 (201) are permitted.

**Table II: Acceptable Analysis Method Codes When Reporting to DEP**

<b>Contaminant Name</b>	<b>Contaminant Code</b>	<b>Acceptable Analysis Method Codes</b>
<b><u>SECONDARY REGULATED CONTAMINANTS</u></b>		
Aluminum	1002	101, 125, 126, 169, 170, 171
Chloride	1017	120, 156
Color	1905	129
Corrosivity	1910	138, 140
Foaming Agents	2905	207
Iron	1028	101, 125, 126, 169, 171
Manganese	1032	101, 125, 126, 169, 170, 171
Odor	1920	133
pH	1925	135
Silver	1050	101, 125, 126, 169, 170, 171
Sodium	1052	101, 169, 171
Sulfate	1055	112, 120, 134, 137, 146
TDS (Filterable)	1057	139
Zinc	1095	101, 169, 170, 171

**Table III: Approved Analytical Methods for Chemicals**

<b>Method Code</b>	<b>Analytical Method</b>
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**ANALYSIS METHOD FOR ASBESTOS:**

009 Transmission Electron Microscopy (TEM)

**ANALYSIS METHODS FOR NITRATE & NITRITE:**

109 Manual Cadmium Reduction  
120 Ion Chromatography  
122 Nitrate Ion Selective Electrode  
163 Automated Cadmium Reduction  
168 Spectrophometric (Nitrite only)  
179 Hach 10206 (Dimethylphenol) (Nitrate only)

**ANALYSIS METHODS FOR IOCs**

101 Atomic Absorption, Direct Aspiration  
103 Manual Cold Vapor Technique (245.1)  
107 Manual Ion Selective Electrode (Fluoride)  
111 Colorimetric SPADNS, w/Distillation  
115 Alizarin Fluoride Blue  
118 Automated Ion Selective Electrode (Fluoride)  
119 Automated Cold Vapor Technique (245.2)  
120 Ion Chromatography (300.0, 300.1)  
123 Atomic Absorption, Gaseous Hydride  
125 Graphite Furnace (Flameless AA)  
126 Graphite Furnace (Platform) (200.9)  
169 Inductively Coupled Plasma (ICP) (200.7)  
170 ICP, Mass Spec. (200.8)  
171 ICP-Atomic Emission Spectrometry (AES) (200.5)  
181 Distillation, Spec. (335.2)  
182 Distillation, Semi-Automated, Spectrophotometric (335.4)  
183 Distillation, Selective Electrode  
184 Distillation, Amenable Spectrophotometric  
185 UV, Distillation, Spectrophotometric  
186 Micro Distillation, Flow injection, Spectrophotometric  
187 Ligand Exchange and Amperometry

**ANALYSIS METHODS FOR VOCs:**

211 Chlorinated Disinf. Byproducts and Chlorinated Solvents by LLE and GC w/  
Electron Capture Detector (ECD) (551)  
217 Purge and Trap GC (502.2)  
221 Purge and Trap, Capillary Column GC/MS (524.2)  
224 Purge and Trap, Capillary Column GC/MS (524.3)

**Table III: Approved Analytical Methods for Chemicals**

<b>Method Code</b>	<b>Analytical Method</b>
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**ANALYSIS METHODS FOR SOCs:**

200	Chlorinated Pest, by LSE & GC w/ECD (508.1)
201	Chlorinated Pest, GC w/ECD (508)
202	Perchlorination & GC (Quantitate PCBs as DCB - 508A)
203	Chlorinated Acids, GC w/ECD (515.1, 515.3, 515.4)
204	Haloacetic Acids & Dalapon by Liquid-Solid Extraction & GC w/ECD (552.1)
205	Chlorinated Acids, GC w/ECD (515.2)
211	Chlorinated Disinf. Byproducts and Chlorinated Solvents by LLE and GC w/ ECD (551, 551.1)
219	Microextraction and GC w/ECD (504.1 for EDB & DBCP)
222	Liquid-Solid Extraction & Cap. Col. GC/MS (525.2, 525.3)
225	Microextraction & GC (Organohalide Pest & PCBs - 505)
226	Phthalate & Adipate Esters determination by method 506
227	GC w/Nitrogen-Phosphorous Detector (507)
229	Chlorinated Dioxins & Furans by Isotope Dilution (1613)
231	Direct Aqueous Injection HPLC (531.1/SM6610)
232	Direct Aqueous Injection HPLC (547/SM6651 for Glyphosate)
233	Determination of Endothall by Ion Exchange Extraction., Acidic Methanol Methylation, GC/MS (548.1)
235	Determination of Diquat & Paraquat by LSE and HPLC w/UV Detection (549.1)
237	Liquid-Liquid Extraction & HPLC w/Coupled UV & Fluorescence Detection (550)
238	Liquid-Solid Extraction & HPLC w/Coupled UV & Fluorescence Detection (550.1)
245	Chlorinated Acids in Water by HPLC w/ Photodiode Array Ultraviolet Detection (555)

**Table III: Approved Analytical Methods for Chemicals**

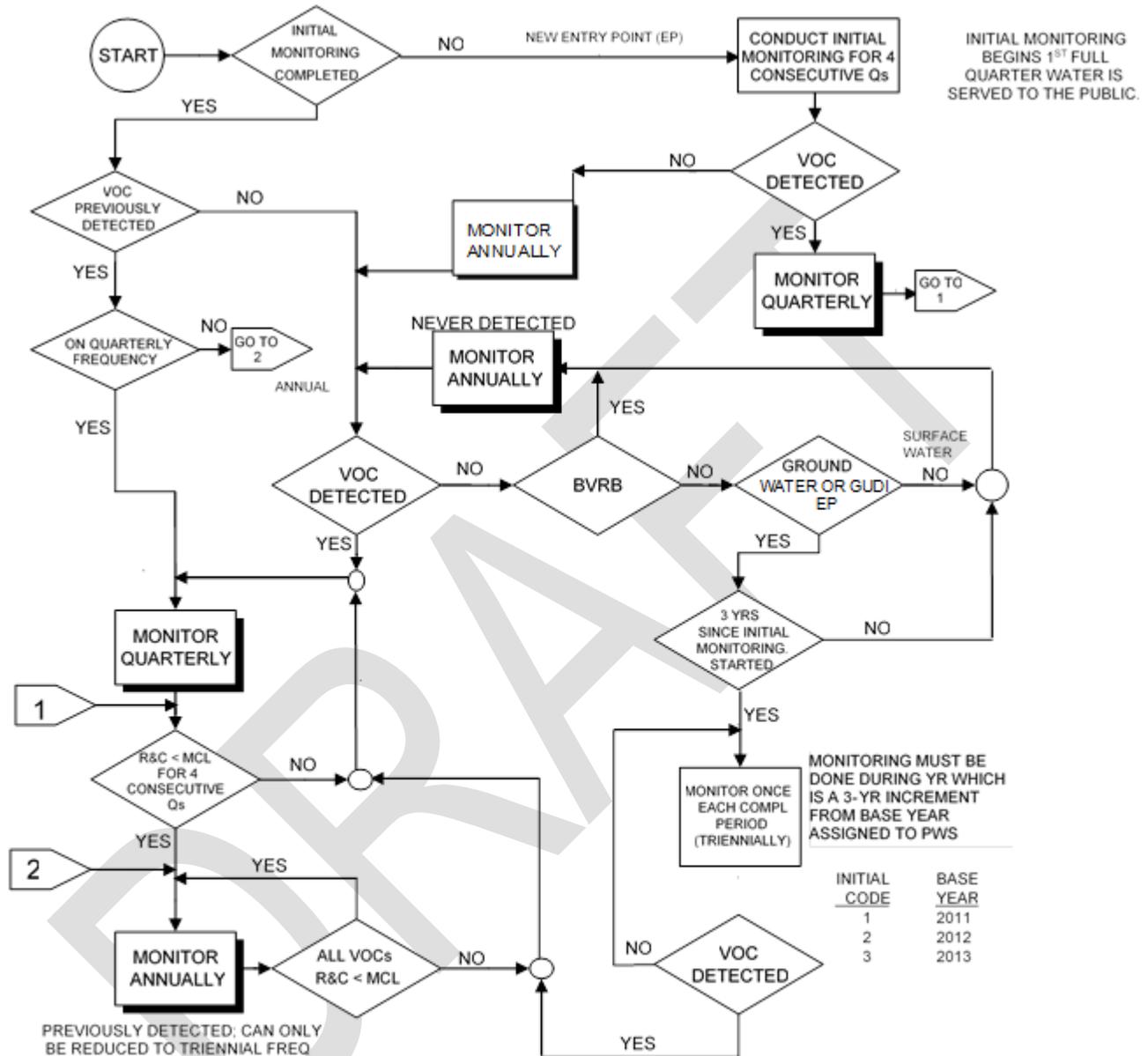
<b>Method Code</b>	<b>Analytical Method</b>
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**ANALYSIS METHODS FOR SECONDARY CONTAMINANTS:**

101	Atomic Absorption, Direct Aspiration
112	Automated Methylthymol Blue (Sulfate)
120	Ion Chromatography
125	Graphite Furnace (Flameless AA)
126	Graphite Furnace (Platform)
129	Platinum-Cobalt (Color)
133	Consistent Series (Odor)
134	Gravimetric (Sulfate)
135	Glass Electrode (pH)
137	Turbidimetric (Sulfate)
138	Langlier Index (Corrosion)
139	Total Residue (TDS)
140	Aggressive Index (Corrosion)
146	Gravimetric (Sulfate)
156	Iodometric (Chloride)
169	Inductively Coupled Plasma (ICP)
170	ICP, Mass Spec.
171	ICP, AES
207	Methylene Blue Method (Foaming Agent)

# VOC MONITORING REQUIREMENTS

FOR ALL COMMUNITY AND NONTRANSIENT NONCOMMUNITY PWSs AND BOTTLED, VENDED, RETAIL, & BULK WATER PWSs (BVRBs)



INITIAL MONITORING BEGINS 1<sup>ST</sup> FULL QUARTER WATER IS SERVED TO THE PUBLIC.

MONITORING MUST BE DONE DURING YR WHICH IS A 3-YR INCREMENT FROM BASE YEAR ASSIGNED TO PWS

INITIAL CODE	BASE YEAR
1	2011
2	2012
3	2013

PREVIOUSLY DETECTED: CAN ONLY BE REDUCED TO TRIENNIAL FREQ VIA A USE WAIVER.

R&C MEANS < 80% OF MCL.

ANNUAL MONITORING IS ON A CALENDAR YEAR BASIS; I.E., SAMPLING MUST BE COMPLETED BY DEC 31.

NOTE: IF SOURCE TREATMENT IS INSTALLED, QUARTERLY PERFORMANCE MONITORING IS REQUIRED IN ADDITION TO ROUTINE ANNUAL COMPLIANCE MONITORING.

## NOTE

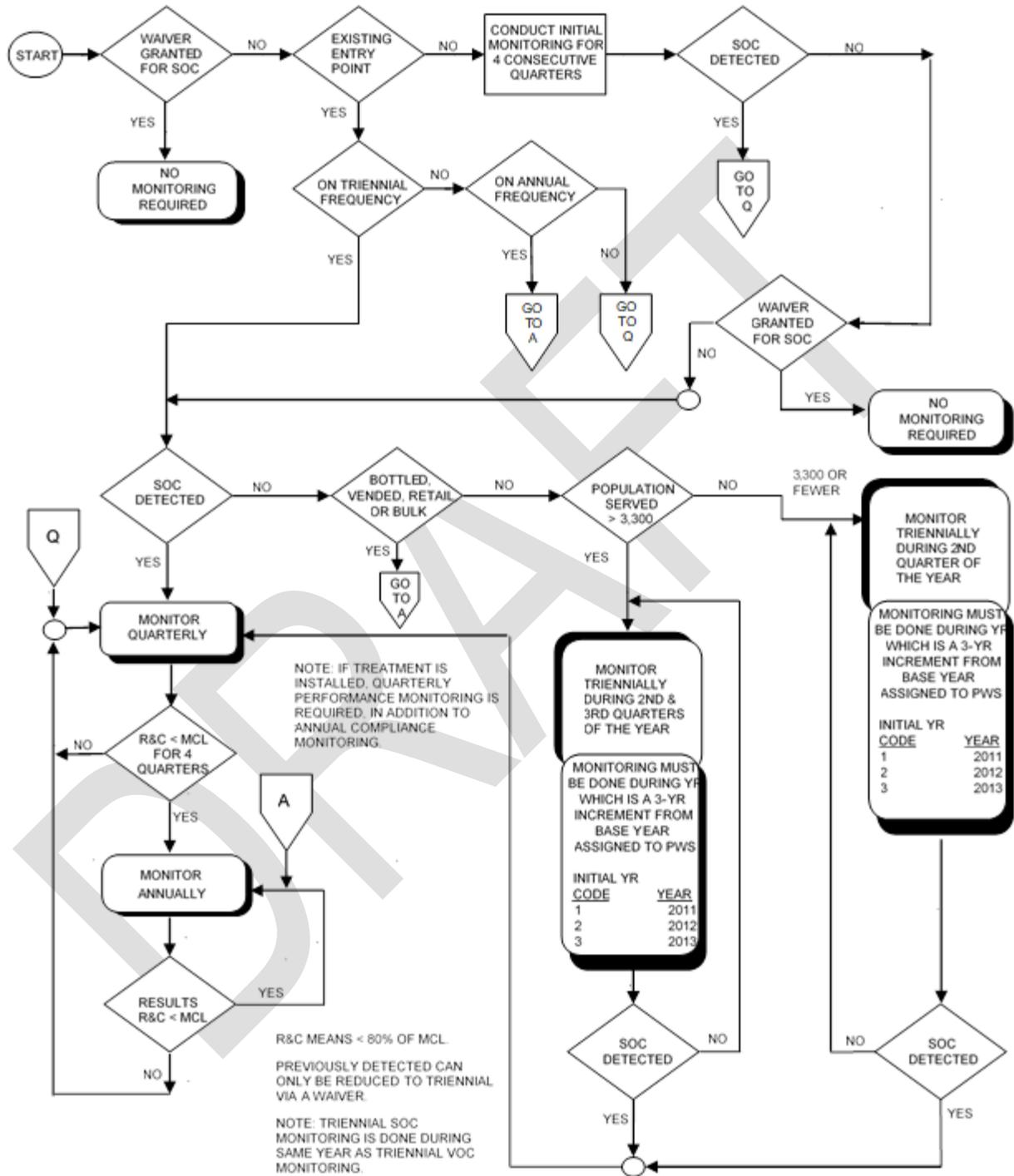
ROUTINE MONITORING CONSISTS OF ANALYSIS FOR 20 VOCs FROM EACH ENTRY POINT. MONITORING IS NOT REQUIRED AT PURCHASED WATER ENTRY POINTS, IF THE SELLING PWS CONDUCTS THE REQUIRED MONITORING & COMPLIES WITH THE MCLs.

IF ANY 2-CARBON COMPOUNDS ARE DETECTED, TEST FOR VINYL CHLORIDE.

IF A VOC MCL VALUE IS EXCEEDED WHILE ON ANNUAL OR TRIENNIAL MONITORING, A CHECK SAMPLE MUST BE TAKEN WITHIN 2 WEEKS AND ANALYZED FOR THE VOC WHICH EXCEEDED THE MCL. MCL COMPLIANCE WILL BE BASED ON THE AVERAGE OF THE ROUTINE AND CHECK SAMPLES.

# SOC MONITORING REQUIREMENTS

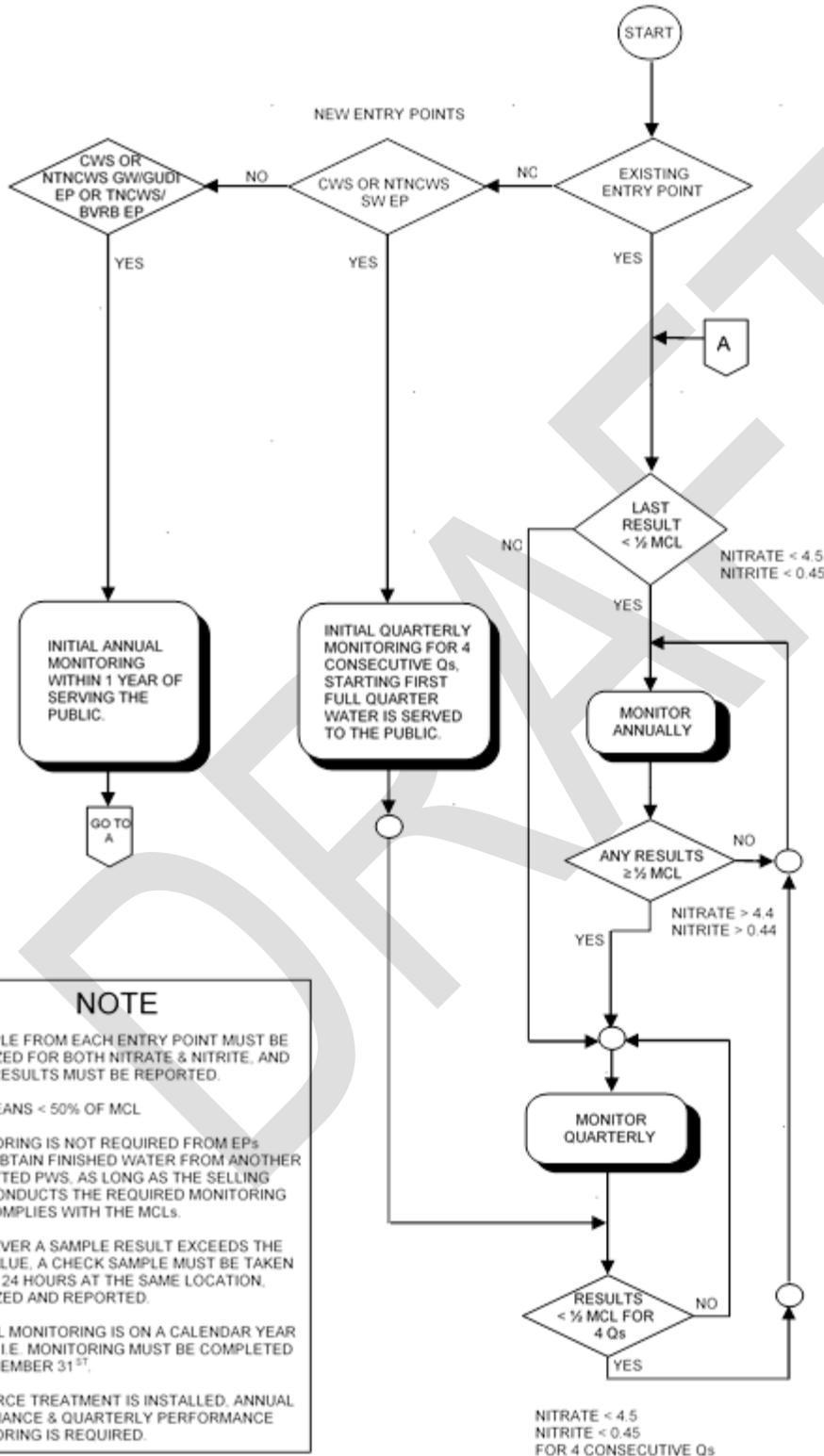
FOR ALL COMMUNITY AND NONTRANSIENT NONCOMMUNITY PWSs AND BOTTLED, VENDED, RETAIL, & BULK WATER PWSs (BVRBs)



NOTE: SOC MONITORING IS REQUIRED ON A CONTAMINANT-BY-CONTAMINANT BASIS, INDEPENDENT OF EACH OTHER. MONITORING IS NOT REQUIRED AT ENTRY POINTS THAT OBTAIN WATER FROM ANOTHER PERMITTED PWS, AS LONG AS THE SELLING PWS CONDUCTS THE REQUIRED MONITORING & COMPLIES WITH THE MCLs. BASED ON A VULNERABILITY ASSESSMENT, A PWS MAY BE GRANTED A 'USE' OR 'SUSCEPTIBILITY' WAIVER FROM TESTING FOR ANY INDIVIDUAL SOC.

NOTE: IF SAMPLING ANNUALLY OR LESS FREQUENT, A CHECK SAMPLE MUST BE TAKEN WITHIN 2 WEEKS OF ANY SAMPLE RESULT THAT EXCEEDS THE MCL.

# NITRATE / NITRITE MONITORING REQUIREMENTS - ALL PWSs



# IOC MONITORING REQUIREMENTS

(EXCEPT FOR NITRATE, NITRITE, & ASBE STOS) (ALSO DOES NOT INCLUDE LEAD & COPPER EXCEPT FOR BVRBs)

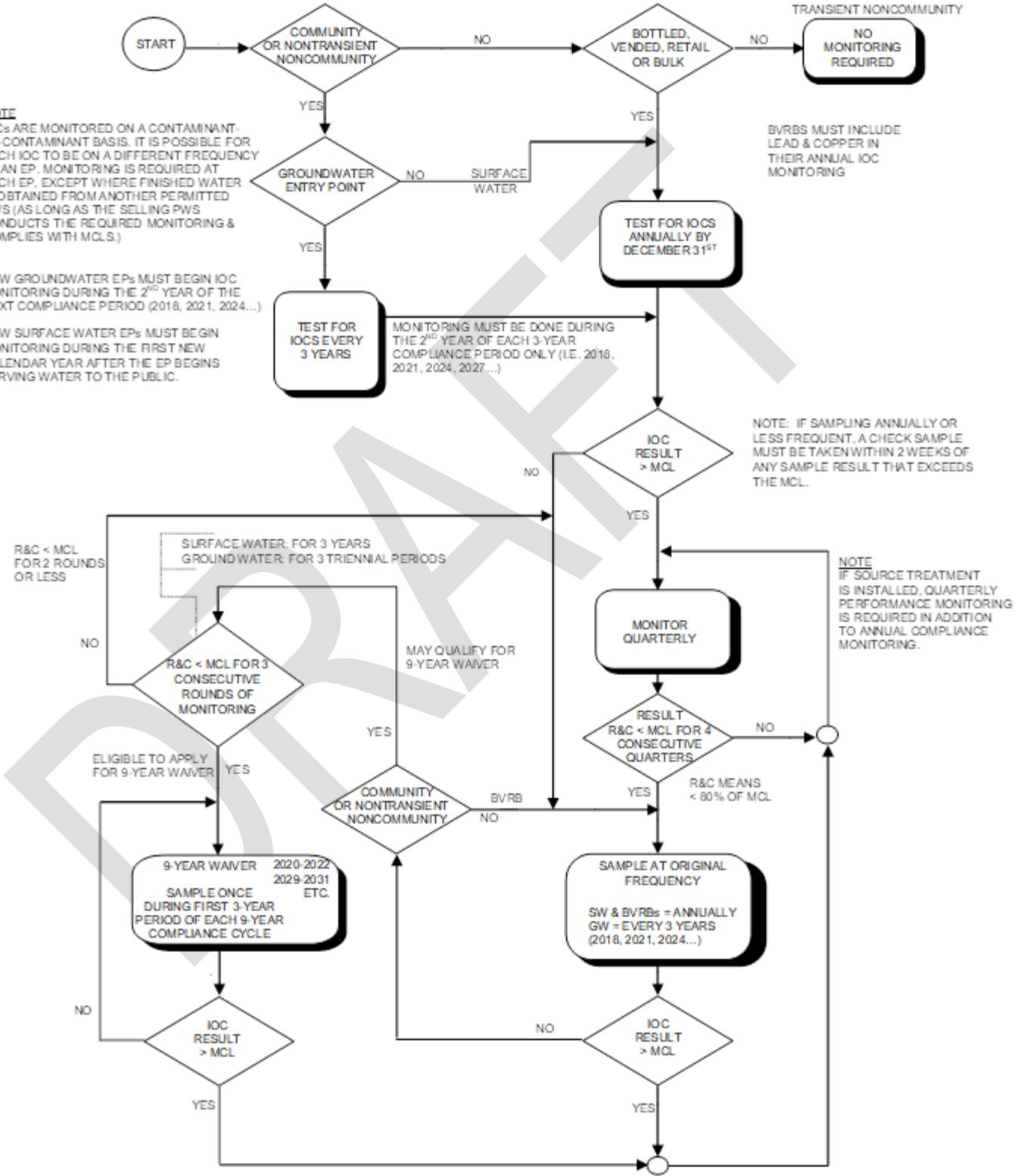
**NOTE**

IOCs ARE MONITORED ON A CONTAMINANT-BY-CONTAMINANT BASIS. IT IS POSSIBLE FOR EACH IOC TO BE ON A DIFFERENT FREQUENCY AT AN EP. MONITORING IS REQUIRED AT EACH EP, EXCEPT WHERE FINISHED WATER IS OBTAINED FROM ANOTHER PERMITTED PWS (AS LONG AS THE SELLING PWS CONDUCTS THE REQUIRED MONITORING & COMPLIES WITH MCLs.)

NEW GROUNDWATER EPs MUST BEGIN IOC MONITORING DURING THE 2<sup>ND</sup> YEAR OF THE NEXT COMPLIANCE PERIOD (2018, 2021, 2024...)

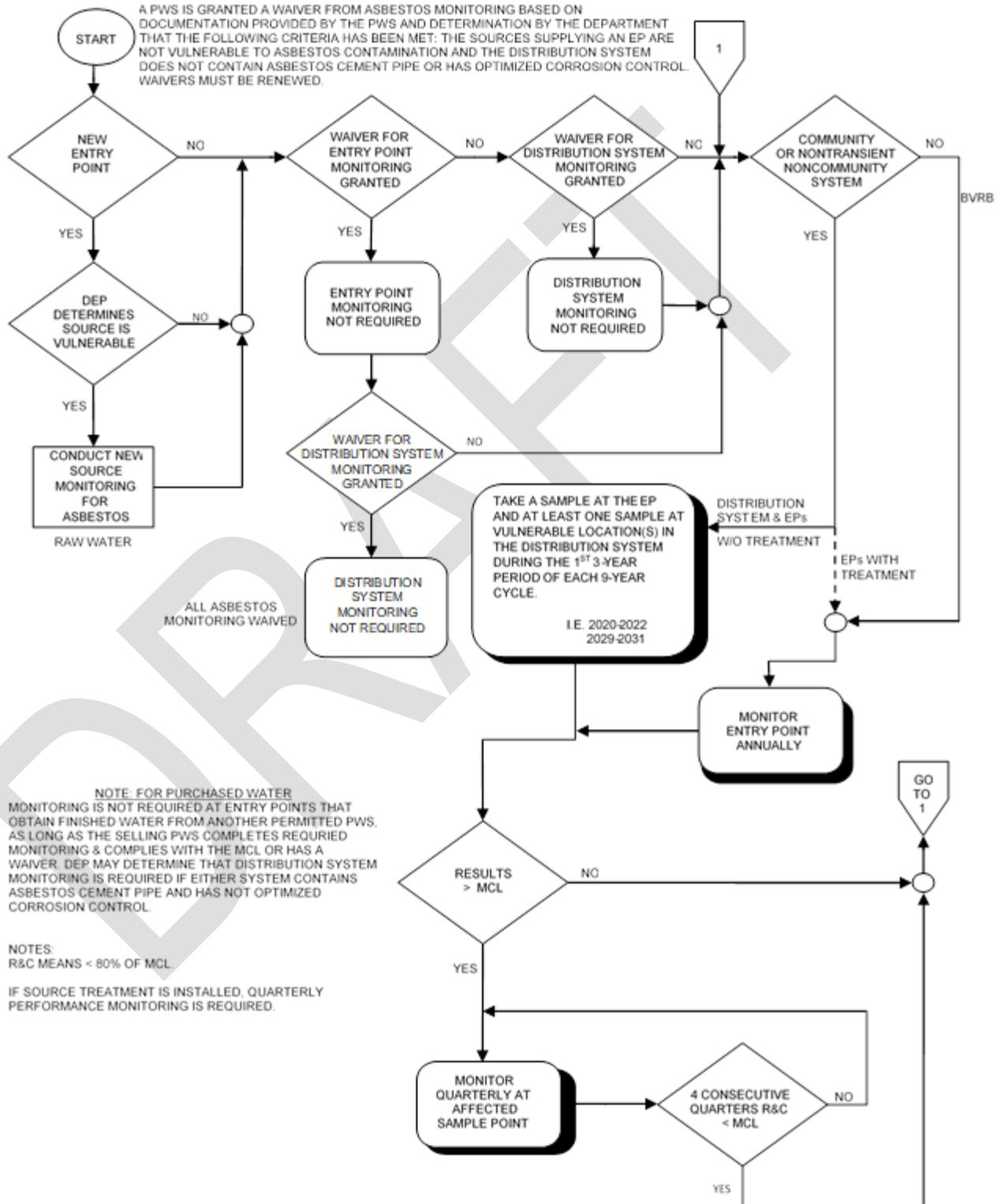
NEW SURFACE WATER EPs MUST BEGIN MONITORING DURING THE FIRST NEW CALENDAR YEAR AFTER THE EP BEGINS SERVING WATER TO THE PUBLIC.

TRANSIENT NONCOMMUNITY



# ASBESTOS MONITORING REQUIREMENTS

FOR ALL COMMUNITY AND NONTRANSIENT NONCOMMUNITY PWSs AND BOTTLED, VENDED, RETAIL, & BULK WATER PWSs (BVRBs)



## SECTION 6: SCENARIOS

Example 1 - VOCS - No detects

**PWS Name:** PURITAN WATER AUTH.  
**PWS Address:** PO BOX 2984  
MONITOR, PA 17105

**PWS ID:** 1234501  
**Population:** 6,300  
**Entry Point ID:** 101 (CLEAR RUN INTAKE)  
**Source Type:** SURFACE WATER  
**Sample Date:** 01/15/19  
**Contaminant:** VOCs  
**Monitoring frequency:** ANNUAL  
**Circumstances:** ROUTINE ANNUAL MONITORING  
**Lab Name:** LUCKY LABORATORIES  
**Lab ID:** 12341  
**Analysis Date:** 01/16/19  
**Method:** PURGE AND TRAP GC - 502.2 (CODE = 217)

**Results:** NO DETECTS

**Comments:** When no VOCs are detected, instead of listing all 20 VOCs on the form, you may use the group code VOC1.

# Safe Drinking Water Act



VIEW and EDIT RECORDS  
 Click [here](#) for a Printer Friendly Version  
[View a Monitoring Calendar](#)

SDWA-4														
Current Lab Certifications							Contaminants not Requiring Certification							
<input type="checkbox"/>	PWSID	Contam ID	Analysis Method	Result	Lower Limit of Detection	Counting Error	Analysis Date	Loc/EP ID	Loc/EP ID 2	Sample Date	Sample Type	Sample Time	Lab ID	Sample ID
	<a href="#">Sort</a>												<a href="#">Sort</a>	
<input type="checkbox"/>	1234501	VOC1	217	0.0			011619	101	001	011519	E	1030	12341	

DRAFT

Example 2 - VOCs - Detected

**PWS Name:** PURITAN WATER AUTH.  
**PWS Address:** PO BOX 2984  
MONITOR, PA 17105

**PWS ID:** 1234501  
**Population:** 6,300  
**Entry Point ID:** 102 (WELL 1 & 2)- 50%/50% mix of both wells  
**Source Type:** GROUND WATER  
**Sample Date:** 07/15/19  
**Contaminant:** VOCs  
**Monitoring frequency:** ANNUAL  
**Circumstances:** ROUTINE ANNUAL MONITORING  
**Lab Name:** LUCKY LABORATORIES  
**Lab ID:** 12341  
**Analysis Date:** 07/16/19  
**Method:** PURGE AND TRAP GC - 502.2 (CODE = 217)  
**Results:** TRICHLOROETHYLENE = 0.0022 MG/L  
OTHER VOCs = NO DETECTS

**Comments:** Report results of all VOCs. Since trichloroethylene is a 2-carbon compound, and this is a groundwater entry point, vinyl chloride needs to be analyzed, and the result reported.

In this case there is no violation, but if the trichloroethylene result would have exceeded its MCL value (0.005), then a check sample would be required within 2 weeks. The average of the original sample and the check sample would determine if there was an MCL violation.

The entry point monitoring would also increase to quarterly. Once on quarterly monitoring, the average of 4 quarters of sampling is used for MCL determination.

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234501	2990	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2982	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2980	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2968	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2969	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2977	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2380	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2979	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2964	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2983	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2992	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2989	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2986	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2987	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2991	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2378	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2981	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2985	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2984	217	0.0022			071619	102	MIX	071519	E	1130	12341	
1234501	2976	217	0			071619	102	MIX	071519	E	1130	12341	
1234501	2955	217	0			071619	102	MIX	071519	E	1130	12341	

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Example 3 - Nitrate - MCL Violation

**PWS Name:** FERTILE FARMS WATER CO  
**PWS Address:** 100 FARM ROAD  
GARDENVILLE, PA 17105

**PWS ID:** 1234503  
**Population:** 3,500  
**Entry Point ID:** 101 (MIDCROP WELL)  
**Source Type:** GROUND WATER  
**Sample Date:** 02/18/19  
**Contaminant:** NITRATE  
**Monitoring Frequency:** QUARTERLY  
**Circumstances:** QUARTERLY MONITORING DUE TO PREVIOUS HIGH RESULTS  
**Lab Name:** ZINN'S LABORATORY  
**Lab ID:** 12342  
**Analysis Date:** 2/18/19  
**Method:** ION CHROMATOGRAPHY (CODE = 120)  
**Results:** 14.7 MG/L

**Comment:** Nitrite is required to be analyzed and reported. (SDWA-1 form not shown in this example.)

The result exceeds the MCL of 10. Therefore, a check sample was taken within 24 hrs on 02/19/19 and analyzed on the same day. The result of the check sample was 12.8 mg/L.

$$\frac{14.7 + 12.8}{2} = 13.7 \text{ MG/L} = \text{MCL VIOLATION}$$

The average of the 2 results exceed the nitrate MCL, so the water supplier must be notified within 1 hour, and the department must be notified within 24 hours, as per 25 Pa. Code §109.408(a)(2).

The SDWA-1 form may be used to report the nitrate results because it allows you to report both the routine entry point sample (E) and check sample (C) on the same form. The SDWA-4 form may be used, but then two SDWA-4 forms are required; one for the "E" sample, and one for the "C" sample.

**SDWA1**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis Date	LocationID	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234503	1040	120	14.7	021819	101	021819	E	1115	12342	
1234503	1040	120	12.8	021919	101	021919	C	0900	12342	

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Example 4 - Nitrate - Greater than ½ MCL

**PWS Name:** BOUNTIFUL MENNONITE SCHOOL (NONTRANSIENT PWS)  
**PWS Address:** 3050 BACKWOODS ROAD  
LITTLE VILLAGE, PA 17105

**PWS ID:** 1234504

**Population:** 85

**Entry Point ID:** 100 (WELL)

**Source Type:** GROUND WATER

**Sample Date:** 09/20/19

**Contaminant:** NITRATE & NITRITE

**Monitoring Frequency:** ANNUAL

**Circumstances:** ROUTINE ANNUAL ENTRY POINT MONITORING

**Lab Name:** ZINN'S LABORATORY

**Lab ID:** 12342

**Analysis Date:** 9/20/19

**Method:** ION CHROMATOGRAPHY (CODE = 120)

**Results:** 4.9 MG/L

**Comment:** The result, when rounded to the least significant digit of the MCL, equals 5 mg/L. This is not an MCL violation, but whenever the nitrate result for a community or non-transient community entry point is equal to or greater than one-half the nitrate MCL, the nitrate monitoring frequency is increased to quarterly. 5 mg/L is equal to one-half the nitrate MCL of 10. Therefore, entry point 100 for this PWS will have to go on a quarterly monitoring schedule.

Although this result could be reported on either an SDWA-4 form or an SDWA-1 form, the result for this scenario is shown reported on an SDWA-4 form. Also, the result could be reported as 4.9 or 5.

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234504	1040	120	4.9			092019	100	001	092019	E	0845	12342	
1234504	1041	120	0			092019	100	001	092019	E	0845	12342	

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Example 5 - Nitrate and Nitrite

**PWS Name:** HOME COOK'N DINER  
**PWS Address:** 123 RICH VALLEY ROAD  
RICH VALLEY PA 17105

**PWS ID:** 1234565  
**Population:** 150  
**Entry Point ID:** 101 (Wells 1, 2 & 3- 50%, 25%, 25%)  
**Source Type:** GROUND WATER  
**Sample Date:** 10/12/19  
**Contaminant:** NITRATE & NITRITE  
**Monitoring Frequency:** ANNUAL  
**Circumstances:** ROUTINE ANNUAL MONITORING FOR NITRATE & NITRITE  
**Lab Name:** ZINN'S LABORATORY  
**Lab ID:** 12342  
**Analysis Date:** 10/12/19  
**Method:** ION CHROMATOGRAPHY (CODE = 120)  
**Results:** NITRATE = 3.5 MG/L  
NITRITE = 0 MG/L

**Comment:** Results do not exceed MCL. Results do not trigger any check sample or increased monitoring.

If either nitrate or nitrite result would have exceeded the MCL value, then a check sample would have been required, per 25 Pa. Code §109.301(7)(ii), and both the nitrate and nitrite check sample results would be submitted together on a second SDWA-4 form, on which the sample type block would be coded with "C".

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234565	1040	120	3.5			101219	101	MIX	101219	E	1015	12342	
1234565	1041	120	0			101219	101	MIX	101219	E	1015	12342	

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Example 6 - IOCs - One MCL Violation

**PWS Name:** LOCHEM HIGH SCHOOL (NONTRANSIENT PWS)  
**PWS Address:** 123 IRONSIDE DRIVE  
IRONTON, PA 17105

**PWS ID:** 1234506

**Population:** 280

**Entry Point ID:** 100 (WELL HOUSE)

**Source Type:** GROUND WATER

**Sample Date:** 06/15/18

**Contaminant:** IOCs

**Monitoring Frequency:** TRIENNIAL

**Circumstances:** ROUTINE TRIENNIAL MONITORING PERIOD - 2018

**Lab Name:** SUREFINE LABORATORIES

**Lab ID:** 12343

**Analysis Date:** 06/16/18 AND 06/17/18

**Method:** AS APPROPRIATE FOR EACH IOC

**Results:** BARIUM = 2.8 MG/L

OTHER IOCs = ALL LESS THAN THE MCLs. SOME RESULTS WERE LESS THAN THE MDL AND CAN THEREFORE BE REPORTED AS "0" (ZERO).

**Comments:** Report results of all IOCs. Since barium exceeded the MCL value, (2.8 rounds to 3, which exceeds the barium MCL of 2) and the monitoring frequency was less than quarterly, a check sample for barium was taken within 2 weeks on 06/21/18 and analyzed on 06/22/18. The result was 2.4 mg/L.

$$\frac{2.8 + 2.4}{2} = 2.6 \text{ mg/l which rounds to } 3$$

This is an MCL violation, per 25 *Pa. Code* §109.301(7)(iii), because the monitoring frequency was less than quarterly, and the average of the original and check samples exceed the MCL.

Also, since the original barium result exceeded the MCL value, the PWS continues monitoring for barium on a quarterly basis until 4 consecutive quarterly results are less than the MCL value. All other IOCs need not be monitored again until the next triennial monitoring year for ground-water entry points (2021).

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234506	1074	125	0.002			061618	100	001	061518	E	1500	12343	
1234506	1005	125	0			061618	100	001	061518	E	1500	12343	
1234506	1010	125	2.8			061618	100	001	061518	E	1500	12343	
1234506	1075	125	0			061618	100	001	061518	E	1500	12343	
1234506	1015	125	0.003			061618	100	001	061518	E	1500	12343	
1234506	1020	125	.004			061618	100	001	061518	E	1500	12343	
1234506	1024	182	.035			061718	100	001	061518	E	1500	12343	
1234506	1025	107	0			061618	100	001	061518	E	1500	12343	
1234506	1035	119	0			061718	100	001	061518	E	1500	12343	
1234506	1036	125	.002			061718	100	001	061518	E	1500	12343	
1234506	1045	125	0			061618	100	001	061518	E	1500	12343	
1234506	1085	125	0			061618	100	001	061518	E	1500	12343	

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234506	1010	125	2.4			062218	100	001	062118	C	1100	12343	

Example 7 - SOCs - One Detection Greater than MCL

**PWS Name:** DOUBLEWIDE MOBILE HOME PARK  
**PWS Address:** PO BOX 222  
SAMPLETOWN, PA 17105

**PWS ID:** 1234507

**Population:** 160

**Entry Point ID:** 100 (WELL 1)

**Source Type:** GROUND WATER

**Sample Date:** 08/20/18

**Contaminant:** SOCs

NOTE: This PWS received a waiver from monitoring for all SOCs except chlordane, lindane, and methoxychlor. Therefore, results need only be reported for these 3 SOCs.

**Monitoring Frequency:** QUARTERLY

**Circumstances:** INITIAL QUARTERLY MONITORING - NEW ENTRY POINT

**Lab Name:** EXTRACTION ASSOCIATES

**Lab ID:** 12344

**Analysis Date:** 08/21/18

**Method:** AS APPROPRIATE FOR EACH SOC

**Results:** CHLORDANE = 0.0028 MG/L

LINDANE & METHOXYCHLOR = BOTH LESS THAN THEIR RESPECTIVE MDLs, AND CAN THEREFORE BE REPORTED AS "0" (ZERO).

**Comments:**

Report results of the 3 SOCs. When the chlordane result is rounded to the least significant digit of its MCL the result rounds to 0.003 mg/l, which exceeds the MCL value of 0.002. Since this PWS is conducting quarterly monitoring for these SOCs, a check sample is not required for the chlordane result which exceeded its MCL value. Also, since this was the third quarter of quarterly monitoring, there is no MCL violation unless the sum of the 3 quarterly results for chlordane divided by 4 exceeds the MCL. (An MCL violation is based on a running average of 4 quarterly results.) Because chlordane exceeded its MCL value, this PWS will have to continue quarterly monitoring at this entry point for chlordane until 4 quarterly results are less than the MCL. Had this been an annual or triennial sample taken in later years, then a check sample would have been required for chlordane, and the entry point testing for chlordane would be increased to quarterly until 4 quarterly results are less than the MCL, per 25 Pa. Code §109.301(6).

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234507	2959	225	0.0028			082118	100	001	082018	E	1530	12344	
1234507	2010	225	0			082118	100	001	082018	E	1530	12344	
1234507	2015	225	0			082118	100	001	082018	E	1530	12344	

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Example 8 - SOCs - One SOC on Annual Monitoring

**PWS Name:** BIG CITY WATER BUREAU  
**PWS Address:** 10 E SKYLINE BLVD  
PITTSDELPHIA PA 17105

**PWS ID:** 1234508

**Population:** 110,000

**Entry Point ID:** 105 (NORTH STANDPIPE)

**Source Type:** SURFACE WATER

**Sample Date:** 04/18/19

**Contaminant:** ENDOTHALL

**Monitoring Frequency:** ANNUAL, PREVIOUS DETECT

**Circumstances:** This PWS received a waiver for several of the SOCs. When the remaining SOCs were tested during initial monitoring in 2011, none of the SOCs were detected except for endothall, which was detected below the MCL in the 2<sup>nd</sup> quarter. As a result, endothall is tested annually in the 2<sup>nd</sup> quarter. This is an example of an annual endothall test report. (The other SOCs are on a triennial frequency.)

**Lab Name:** EXTRACTION ASSOCIATES

**Lab ID:** 12344

**Analysis Date:** 04/19/19

**Method:** GC - 548 (CODE = 233)

**Results:** 0.035 MG/L

**Comments:** The result does not exceed the MCL. Therefore, monitoring for endothall would continue annually. If the result would exceed the MCL, then a check sample would be required within 2 weeks, and monitoring would be increased to quarterly. If the average of the original and a check sample would exceed the MCL then an MCL violation would occur.

**SDWA4**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis LLD	Analysis CE	Analysis Date	LocID	LocID2	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234508	2033	233	0.035			041919	105	001	041819	E	0900	12344	

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Example 9 - Asbestos

**PWS Name:** FIBER WATER CO  
**PWS Address:** 7 FILAMENT STREET  
ACEYPIPE, PA 17105

**PWS ID:** 1234509

**Population:** 25,000

**Entry Point ID:** 107 (FIRESIDE WELL)

**Source Type:** GROUND WATER

**Sample Date:** 07/27/20

**Contaminant:** ASBESTOS

**Monitoring Frequency:** 9-YEAR

**Circumstances:** Routine 9-year monitoring. Fireside Well water enters the distribution through entry point 107. The system also has asbestos/cement pipe in its distribution system and has not yet optimized its corrosion control treatment. The water supplier samples at both the entry point and in the distribution system for asbestos.

**LAB NAME:** MICROTECHNIQUE TESTING LAB

**LAB ID:** 12347

**METHOD:** TEM (CODE = 009)

**RESULTS:** ENTRY POINT 107: 3 MFL  
DISTRIBUTION SYSTEM: 4 MFL

**COMMENTS:** Neither of the results exceed the MCL; the monitoring frequency will not increase. The PWS will continue to monitor for asbestos during the first 3-year period of each 9-year cycle.

In this scenario, the results are reported using the SDWA-1 form since one result is an "E" sample, and the other is a "D" sample. Use the entry point ID for the entry point sample, but any 3-digit code, as specified in the asbestos sample site plan, may be used for the distribution system sample.

**SDWA1**

PWSID	ContamID	Analysis Method	Analysis Result	Analysis Date	LocationID	Sample Date	Sample Type	Sample Time	LabID	SampleID
1234509	1094	009	3.0	072920	107	072720	E	1030	12347	
1234509	1094	009	4.0	072920	901	072720	D	1115	12347	

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**APPENDIX I**  
**DEP & COUNTY HEALTH DEPARTMENT OFFICES CONTACT LIST**

- The completed form is to be addressed to: PA DEP - Safe Drinking Water and sent to the address of the appropriate district office or county health department (CHD) having jurisdiction over the water system.
- District and CHD addresses by county can be found within DEP document number 3930-FM-BSDW0560. This document can be located by searching under “forms” for document number 3930-FM-BSDW0560 on eLibrary at the following link:  
<http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=3195>.

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