DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Safe Drinking Water

DOCUMENT NUMBER: XXX – XXXX – XXX

TITLE: Situations Requiring One-Hour Reporting to the Department of Environmental Protection

EFFECTIVE DATE: Upon publication of notice as final in the *Pennsylvania Bulletin*

AUTHORITY: Pennsylvania's Safe Drinking Water Act (35 P.S. § 721.1 *et seq*.) and regulations contained in Title 25 Pa. Code Chapter 109

POLICY: Public water suppliers and Department of Environmental Protection (DEP) staff should follow the guidance and procedures presented in this document to respond to situations that require one-hour reporting to DEP.

PURPOSE: The purpose of this document is to provide clarity to which situations require one-hour reporting to DEP that will ensure the protection of public health.

APPLICABILITY: This guidance will apply to all public water systems as defined under the Pennsylvania Safe Drinking Water Act.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies 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.

PAGE LENGTH: XX pages

DEFINITIONS: See Title 25 *Pa. Code* Chapter 109

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GUIDANCE DOCUMENT FOR SITUATIONS REQUIRING ONE-HOUR REPORTING TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

I. PURPOSE:

This document is intended to provide guidance for public water suppliers and DEP staff regarding situations that require one-hour reporting to DEP. The situations that are described in this document are not inclusive, but are examples of situations that, when encountered, would require one-hour notification to DEP. There are many situations that require one-hour notification to DEP and not all are contained in this document. The examples provided can serve as a guide when encountering situations not covered here.

II. BACKGROUND:

Section 109.701(a)(3) of DEP's regulations require water systems to report to DEP within one hour of discovery of a variety of situations or circumstances. This regulation requires one-hour reporting to DEP because the situations or circumstances listed in the regulation and this guidance have the potential to have an adverse effect on human health as a result of short-term exposure.

Notification by the water system to DEP within one hour of discovery of a situation allows for information to be shared and an appropriate response discussed, if needed, to protect public health. While many situations require public notification and corrective action(s), it is important to note that not all situations will. After consulting with DEP, some situations may be determined not to be violations and/or not require public notification. For situations not included in this document, if a water system is unsure whether one-hour reporting is required, it is always better to notify DEP for a situation that does not require notification than to not make the call when notification was required.

Water systems should keep their DEP sanitarian contact information as well as the local DEP office information up-to-date. These are the numbers to call during daytime hours, 8 AM to 4 PM. Not all emergency situations, or even potential problems, occur during normal business hours. If one-hour notification is required outside of regular business hours, or if you are unable to directly contact your sanitarian during routine business hours, it is important to know how to contact DEP. The list of Regional and District Office phone numbers as well as the state-wide Emergency Response phone number can be found in the following document:

DEP Form # 3930-FM-BSDW0560

This document can be located in eLibrary by visiting this website http://www.depgreenport.state.pa.us/elibrary/Search, entering 3930-FM-BSDW0560 in the space below "Document Number" and then clicking "Search".

When calling the Emergency Response phone number, the water system should request to be called back by Safe Drinking Water program staff. The circumstances and situations discussed in this document require one-hour notification to DEP, which means talking to someone. Leaving a voicemail or sending an email for someone to see the next morning, or later, is not acceptable and does not meet the intended requirements of the regulations.

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III. APPLICABLE REGULATIONS OF TITLE 25 PA. CODE CHAPTER 109 (SAFE DRINKING WATER):

A. **§ 109.4.** Requirement to effectively operate and maintain public water system facilities and to take whatever investigative or corrective action is necessary to assure that safe and potable water is continuously supplied to users

B. **§109.301.** General Monitoring Requirements

C. **§109.408** Tier 1 Public Notice – categories, timing, and delivery of notice

D. **§109.409** Tier 2 Public Notice – categories, timing and delivery of notice

E. **§ 109.701(a)(3).** One-hour reporting requirements

F. **§ 109.707(a)(2).** Emergency Response Plan- Communication Procedures and contact information. For each probable emergency situation, including but not limited to those specified in §109.701(a)(3), a list of appropriate contact persons, phone numbers, and response to each situation

IV. OTHER APPLICABLE REFERENCES:

A. "Policy for Issuing and Removing Water Supply Warnings", DEP #393-2129-005, October 2009.

B. "Policy for Determining When Loss of Positive Pressure Situations in the Distribution System Require One-Hour Reporting to the Department and Issuing Tier 1 Public Notification", DEP #383-2129-004, October 2009 (currently being updated)

C. "Public Water Supply Manual, Part II: Community System Design Standards", DEP #394-2125-004, May 2006 (currently being updated)

V. ONE-HOUR REPORTING SITUATIONS:

A. One-Hour Reporting Requirements contained in §109.701(a)(3)

Under §109.701(a)(3), a public water supplier shall report the circumstances to DEP within 1 hour of discovery for the following violations or situations:

- A primary MCL or MRDL has been exceeded or a treatment technique requirement has been violated under Subchapter B, K, L or M.
- A sample result requires the collection of check samples under §109.301.
- Circumstances exist which may adversely affect the quality or quantity of drinking water including, but not limited to:
  - The occurrence of a waterborne disease outbreak.
  - A failure, significant interruption or breakdown in key water treatment processes.
  - A disaster that disrupts the water supply or distribution system.
  - A chemical spill.

- An unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.
- An overfeed of a drinking water treatment chemical that exceeds a published maximum use value.
- A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.
- A lack of resources that adversely affects operations, such as staff shortages, notification by the power utility of planned lengthy power outages or imminent depletion of treatment chemical inventories.

o Any sample result is *E. coli* positive.

B. To further clarify this requirement, **a water supplier shall notify DEP within 1 hour of discovery if ANY of the following circumstances occur:**

1. *A primary MCL (Maximum Contaminant Level) or an MRDL (Maximum Residual Disinfectant Level) has been exceeded or a treatment technique requirement has been violated under Subchapter B, K, L, or M.* This notification requirement encompasses compliance monitoring completed by public water systems to comply with the following standards: Subchapter B – MCLs, MRDLs and treatment technique requirements, Subchapter K – Lead and Copper, Subchapter L – Long-Term 2 Enhanced Surface Water Treatment Rule, and Subchapter M – Groundwater Rule. If a water system is notified by their laboratory of a sample result exceeding an MCL, they are required to notify DEP within one hour of being notified by the laboratory. This notification is required, even if the water system is familiar with the appropriate follow-up action, such as taking confirmation samples or issuing public notice (PN). Water systems should not rely on the lab to do the notification for them. The laboratory is required to notify DEP in writing within 24 hours; they are not required to notify DEP before that if they have contacted (spoken to) the water system. Although a single result above an MCL or MRDL may not be a violation nor require public notification, there are several important reasons for the one-hour notice to DEP:

    a. A single result above the MCL for any nitrate or nitrite sample, or for another chemical parameter for which the water system monitors annually or less frequently, will require the collection of a confirmation sample. The correct timing of the confirmation sample can be reviewed with the Department.

        i. Failure to take a nitrate or nitrite confirmation sample within 24 hours: If the water system is unable to collect a confirmation sample within 24 hours, the customers must be notified immediately of the initial elevated result (Tier 1 PN). A confirmation sample must then be taken within 2 weeks of the first sample (§109.301(7)(ii)(C)(IV)).

        ii. Alternate Nitrate Levels: Under 40 CFR 141.11(d), noncommunity water systems, may be allowed to operate under an alternate nitrate level. This level should be approved in writing by DEP. If this alternate nitrate level is exceeded, one-hour notification to DEP is required.

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b. A single result that is more than four times the MCL will most often result in a violation. Compliance for most chemicals being monitored is determined based on a running annual average of quarterly results. A result in excess of four times the MCL mathematically will often compute to a value greater than the MCL for at least the next four quarters. For example, the MCL for arsenic = 0.010 mg/L. A single result of 0.044 mg/L followed by the next three quarters of a result of 0.00 mg/L will still result in a quarterly average of 0.011 mg/L (i.e. 0.044mg/L ÷ 4 quarters = 0.011 mg/L).

c. A single result may exceed a one-day or ten-day health advisory for a 10 kg child published by the Environmental Protection Agency (EPA). EPA health advisories can be found in EPA's *2018 Edition of the Drinking Water Standards and Health Advisories Tables*. For example, the MCL for toxaphene is 0.003 mg/L; however, the one-day/ten-day health advisory for a 10 kg child is 0.004 mg/L. Although a result of 0.005 mg/L is not four times the MCL and would not require a standard Tier 2 MCL PN, the water system may need to immediately (within 24 hours) collect another sample to verify the health advisory exceedance and Tier 1 PN targeting the sensitive subpopulation(s) may be required.

d. A single result above the MCL but less than four times the MCL and less than an EPA health advisory, may be the first clue that an event is taking place affecting the watershed or aquifer, or a breakdown in treatment is occurring, prompting DEP and the water system to investigate the cause.

e. A single result above an MRDL (a chlorine residual result greater than 4.0 mg/L or a chlorine dioxide residual result greater than 0.8 mg/L) may indicate an overfeed of the disinfectant. Additional residual monitoring by the water system may be needed to confirm that the disinfectant residuals are not exceeding levels harmful to public health. Corrective action including public notification will be needed if the disinfectant level is determined to be too high.

In contrast to MCLs and MRDLs, water systems are required to notify DEP within one hour if self-monitoring results (entry point disinfectant residual, distribution disinfectant residual, or turbidity) are outside of the required parameters **and** violate the treatment technique or are indicative of a breakdown in treatment. These circumstances may or may not result in the issuance of a PN. Treatment techniques include:

f. Unfiltered surface water systems: Violation of the turbidity MCL of 5 NTU based on an average for two consecutive days. (109.408 (a)(5))

g. Filtered surface water systems treatment technique violations for pathogenic bacteria, viruses, and protozoan cysts:
    i. Violation of the single exceedance of the maximum allowable turbidity limit of 1 NTU (Conventional, Direct, Membrane or Other filtration technologies) or 2.0 NTU (slow sand or DE filtration) at the Combined Filter Effluent (CFE) tap (109.408 (a)(6)(i))

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ii. Failure to provide at least 1.0-log inactivation of *Giardia* for more than 4 hours (109.408(a)(6)(ii))

iii. Failure to maintain the minimum entry point residual disinfectant concentration for more than 4 hours and either:
   a. Failure to calculate the log inactivation (109.408(a)(6)(iii)(A)), or;
   b. Failure to meet the minimum log inactivation for more than 4 hours (109.408(a)(6)(iii)(B))

iv. Failure to provide the level of treatment appropriate for the system's *Cryptosporidium* bin classification. Sources in Bins 2, 3, and 4 require additional log removal treatment, whereas Bin 1 sources require no more treatment than meeting turbidity and disinfection requirements. Filter plants can achieve additional log credits for watershed control programs, pre-sedimentation, 2-stage lime softening, maintaining lower CFE levels, maintaining lower individual filter effluent (IFE) levels, and ultraviolet light to name a few options. (109.408(a)(7))

v. Exceedance of the monthly turbidity limit which occurs when 6% or more of the CFE samples in a month exceed the allowable monthly turbidity limit of 0.3 NTU (Conventional, Direct, and Other technologies), 1.0 NTU (Slow Sand or DE filtration), or 0.15 NTU for membrane filtration technologies. Section 109.202(c)(1) establishes that 95% or more of the samples must meet or be lower than the limit required for the specific technology, so 6% of the measurements exceeding the limit would be less than 95% meeting the required level. (109.202(c)(1)(i)(A-C))

h. Groundwater systems: Breakdown in treatment that includes failing to maintain the minimum entry point disinfectant residual for more than 4 hours or failing to maintain an adequate CT value (chorine residual multiplied by time) to demonstrate 4-log inactivation of viruses for more than 4 hours. This situation is one of the more commonly occurring circumstances requiring one-hour notification. A breakdown in disinfection treatment can be a residual lower than the level required for more than 4 hours OR an instantaneous reading of zero chlorine residual at the entry point. (109.1307(a)(1)(ii))

i. Level 1 or Level 2 Assessments: Failure to complete the appropriate assessment within 30 days of the trigger date or failure to complete a corrective action within the approved timeframe. Assessments can be triggered under multiple sampling situations for multiple combinations of positive coliform results and/or late repeat sampling. Several assessments can even be triggered in one month. In the corrective action section of the assessment, appropriate, reasonable and achievable timeframes should be established, and the water system should notify DEP when those corrective actions have been completed. (109.202(c)(4))

j. Seasonal Systems: Failure to complete the approved start-up procedure prior to serving water to the public. Section 109.715 requires each seasonal system to have a DEP-approved seasonal start-up procedure. This start-up procedure

should include the collection of coliform samples showing that coliform is not present. EACH YEAR, a seasonal system must certify to DEP that the start-up procedure was followed BEFORE serving water to the public (§109.715(e)). The date that DEP will be looking for the certification is based on the operating season for the prior year.

k. Lead and Copper treatment technique violations:

i. Failure to install corrosion control treatment: When a system triggers the need for corrosion control treatment, it should be installed within 60 months of the end of the monitoring period in which the action level was exceeded (§109.1102(b)(2)(ii)(D)). One-hour notification is required for failure to meet the deadline to install treatment.

ii. Failure to maintain the range of values for the water quality parameter performance level requirements: Once corrosion control treatment is installed, and the required follow-up monitoring has been completed, the water system must request that water quality parameters be designated (§109.1102(b)(2)(ii)(E)). If the water system fails to maintain those designated performance requirements, one-hour notification is required.

iii. Failure to comply with the lead service line replacement requirements: A system that exceeds the lead action level when conducting lead and copper tap monitoring after construction or modification of corrosion control treatment facilities must begin lead service line replacement following the end of the monitoring period in which the action level was exceeded (§109.1107(d)(1)). Seven percent of the lead service lines must be replaced per year (§109.1107(d)(2)). If this requirement or the conditions of replacement in §109.1107(d)(4) are not met, one-hour notification is required (§109.1101(a)).

l. Significant Deficiency: Failure to take corrective actions within the required timeframe or comply with a DEP-approved corrective action plan or schedule. Significant deficiencies can be determined for a multitude of reasons. Any situation or circumstance deemed a significant deficiency has a corrective action timeframe of 120 days, or longer if approved by DEP in a legal document. Failure to meet those deadlines requires one-hour notification. (109.409(a) and 109.717(4))

m. Distribution Disinfectant Residuals: Failure to maintain the minimum specified level in the distribution system for two consecutive months is a treatment technique violation requiring one-hour notification:

i. For systems collecting less than 40 samples per month and use only groundwater or purchased groundwater, a violation occurs when more than one sample collected per month is less than the required minimum for two consecutive months. (109.710(e)(1))

ii. For systems collecting 40 or more samples per month or that use surface water, GUDI, purchased surface water or purchased GUDI sources, a violation occurs when more than 5% of the samples collected per month

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are less than the required minimum for two consecutive months. (109.710(e)(2))

2. *A sample requires the collection of check samples under §109.301.* If a water system is notified by their lab of a routine monthly total coliform sample which is determined to have total coliform present, then the water system is required to collect a set of three check samples. The results of the check samples are used to determine compliance with the *E. coli* MCL and whether a Level 1 assessment or Level 2 assessment has been triggered. Failure by a water system to collect the check samples will also trigger an assessment. The one-hour reporting to DEP by the water system helps to ensure that check samples are collected within the allotted time frame and at the correct sampling locations. (109.301(3)(ii))

3. *Circumstances exist which may adversely affect the quality or quantity of drinking water.*

    a. *The occurrence of a waterborne disease outbreak (WBDO).* (109.701(a)(3)(iii)(A)) While these situations may be rare, they can and do occur. WBDOs are important to recognize and respond to as quickly as possible. The water system may learn of a WBDO from the health community or another state agency such as the Pennsylvania Department of Health. Investigation and response to a WBDO will more than likely include multiple agencies in addition to DEP such as the Pennsylvania Department of Agriculture's Food Safety Division and/or the Pennsylvania Department of Health. The water system (source, treatment, distribution system, etc.) may be compromised and need to be properly decontaminated. Proper notification to consumers may also be required. Other agencies may be able to provide input as to what the public can do as a result of exposure to contaminated water, but DEP is the primary agency for regulation of the water system.

    b. *A failure, significant interruption or breakdown in key water treatment processes.* (109.701(a)(3)(iii)(B)) This covers a wide range of situations that can occur at a water system, depending on the treatment on site. When treatment is failing to work properly, there is potential for unacceptable water quality to reach the distribution system. Alternatively, the failure may require the water system to stop production of water to fix the problem. A halt in production could lead to insufficient water quantity or distribution system pressure problems. Tier 1 public notification may be required in these situations. Examples of failures, significant interruptions or breakdowns in key water treatment processes include:

        i. A failure to maintain the required minimum disinfectant residual at the entry point for a community water system, a noncommunity water system providing 4-log inactivation of viruses for a groundwater source, or a noncommunity water system providing filtration and disinfection for surface water sources and/or groundwater sources under the direct influence of surface water (GUDI). If the disinfectant residual remains below the minimum required level for more than 4 hours, this is considered a breakdown in treatment as well as a

treatment technique violation and requires notification to DEP within one hour of discovery.

ii. No disinfectant residual detected at the entry point. This differs from the situation described in 3.b.i. in that it is considered an instantaneous breakdown in treatment and notification to DEP is required within one hour of the discovery. Regardless of how quickly the residual is restored, notification to DEP is required in order to assess the threat to public health and determine if public notification is required. If the water system suspects that an on-line monitoring or recording instrument has malfunctioned and the non-detected residual is not representative of the water quality, the water system should immediately analyze a grab sample with an EPA Method 334.0 calibrated and compliant meter. If the grab sample confirms the lack of disinfectant residual, the water system should proceed with notification to the DEP. If the grab sample detects a residual, then the system should properly note the problem, log the substitute grab sample and proceed with repairing the on-line instrument.

Note: One-hour reporting may still be required because of the failure of the on-line instrument. Section 109.301(1)(i)(D) requires water systems providing disinfection of surface and/or GUDI sources to notify DEP within one hour of a failure of continuous monitoring or reporting equipment of the disinfection system. Water systems providing disinfection of groundwater sources are encouraged to notify DEP within one hour of a failure of continuous monitoring or reporting equipment of the disinfection system. At a minimum these systems are required to notify DEP within 24 hours according to §109.1305(a)(1)(iii).

iii. Failure of any treatment process, besides disinfection, that is needed to maintain compliance with a primary MCL or one-day/ten-day health advisory. Examples of other key treatment processes include: coagulant addition, any step in a filtration process (including the collapse of one or more filters), nitrate removal treatment and ultraviolet light for disinfection.

c. A disaster that disrupts the water supply or distribution system. (109.701(a)(3)(iii)(C)) A disaster that disrupts the water supply or distribution system can often be wide ranging, affecting a large portion of, if not the entire system. A storm that causes a power outage to the well and treatment building, a flooded treatment plant, and an earthquake that breaks distribution piping are all examples of disasters that can disrupt water system facilities. These situations are frequently wide-spread and long-lasting. These types of situations should be addressed in the Emergency Response Plan (ERP), under Section 6 in the DEP ERP template. Section 2 of the ERP template addresses communication procedures and contact information. Section 2 also reiterates the one-hour notification requirements to DEP for specific situations. Public notification will more than likely be required in the event of a disaster since

they often affect large portions of the water system and customers may be left without properly treated water when they occur.

d. A chemical spill. (109.701(a)(3)(iii)(D)) Chemical spills that occur within the source water protection area of a surface water or groundwater source can adversely impact water quality. Spills can also occur during delivery, storage, or use of water treatment chemicals. During delivery, a container may break in the plant or a delivery person may overfill a storage vessel. Water systems may store chemicals for several months, during which time, something could happen to the chemical container as it sits, waiting to be used. Or, the container could leak as a chemical is being used from it. A water system's response to a chemical spill should be addressed in the ERP. Upon one-hour notification, DEP will provide guidance regarding what testing is required, depending on the portion of the water system affected and how much chemical was released. Proper secondary containment is essential in preventing spills during storage and use. Some chemicals are not compatible with others and should not be stored in the same area, but if the spill is large enough, this is a consideration. A spill may become a danger for anyone to be in the area without proper protective equipment. DEP can help determine the severity of the situation when the details of the spill are shared. Depending on the magnitude of the spill, the chemical(s) involved, and the portion of the water system affected, PN may or may not be needed.

e. An unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination. (109.701(a)(3)(iii)(E)) Examples of this situation include:

i. A filter plant that recycles a portion of its backwash water to the head of the plant. If an operator fails to turn off the backwash water recycle pumps and a large portion of the flow through the plant consists of backwash water, there is a higher than normal loading of possible pathogens to the source water that may not be able to be properly treated by the sedimentation and filtration processes, causing the potential for pathogen breakthrough and contamination of the finished water. If this situation inadvertently occurs, notification to DEP is crucial to prevent the potentially under-treated water from entering the distribution system, if possible.

ii. There could also be an unexpected loading of pathogens in the source water if/when an upstream sewage treatment plant malfunctions or is overloaded and they fail to notify downstream users.

Again, it depends on the specific details of the situation as to whether PN is required. Early notification to DEP and a quick response to the issue may lessen the chance that PN will be needed.

f. An overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value", as applicable. (109.701(a)(3)(iii)(F) When a water system experiences a drinking water treatment chemical overfeed situation, public

health has the potential to be affected and decisions will need to be made regarding that impact. Maximum use values are specific to the treatment chemical and manufacturer; it is important that water systems maintain accurate records as to the name and strength of the chemical and the manufacturer, so that information is readily available in an emergency. Maximum use values can be posted in the treatment chemical area for easy access when needed. This is another situation that should be addressed in an ERP. If DEP determines that Tier 1 PN is required, DEP may be able to provide important acute health effects language for inclusion in the PN.

g. *A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.* (109.701(a)(3)(iii)(G)) Evidence of contamination could include unusual discoloration of the water and/or taste and odor issues. Field test results could also show evidence of contamination. Example situations with a high risk of contamination of the drinking water include a flooded trench during a main repair, evidence of contamination due to leaking sewer lines or failing septic systems near water lines. The system is also at a high risk of contamination when they have low water storage levels that result in loss of service to customers or high unaccounted for water loss due to leaks in the distribution system. Water suppliers should use a properly certified operator with a Class E license to determine whether evidence or high risk of contamination exists. Refer to DEP's Policy for Determining when Loss of Positive Pressure Situations in the Distribution System Require One-hour Reporting to the Department and Issuing Tier 1 Public Notification. (Document # 383-2129-004)

h. *A lack of resources that adversely affects operations, such as staff shortages, notification by the power utility of planned lengthy power outages or imminent depletion of treatment chemical inventories.* (109.701(a)(3)(iii)(H)) Staff shortages could result from an influenza outbreak, labor strikes or in small water systems, a situation that leads to the only operator being unable to perform their duties. It is important to have an available back-up operator familiar with the system. Lengthy power outages at community water systems should be addressed in the ERP and the Uninterrupted System Service Plan. Imminent depletion of treatment chemical inventories can be due to a failure of the water system to order chemicals, the chemical supplier being unable to supply chemical or a water chemistry change that causes a sharp increase in chemical demand, triggering the water system to use the chemical much quicker than normal. Planning and response dictate whether public notice is required in these situations.

i. *Filtration plant deficiencies***:** Any deficiency that has the potential for adversely affecting the quality or quantity of drinking water. (109.701(a)(3)(iii) Examples include:

    i. Evidence of a damaged underdrain such as boiling during a backwash, severe loss of filter media, and filter media found in the filter effluent lines, the clearwell, IFE turbidimeters, or sample lines.

ii. The collapse of a filter, even when there are additional filters to handle the production of water needed for the system.

iii. Filter Performance: If a particular filter's performance is dramatically worse than the other filters.

j. Exceedance of an EPA Health Advisory for a secondary or unregulated contaminant in the finished water: EPA health advisories for a multitude of contaminants can be found in EPA's *2018 Edition of the Drinking Water Standards and Health Advisories Tables*. Examples of contaminants that you may need information for include:

i. Manganese: Manganese has a lifetime advisory level of 0.3 mg/L, and a 1-day and 10-day health advisory level of 1 mg/L. For bottle-fed infants younger than six months, EPA has established a 10-day health advisory level of 0.3 mg/L.

ii. Harmful Algal Blooms (Total Microcystins) have a 10-day health advisory of 0.3 ug/L for children less than 6 years old and 1.3 ug/L for the entire population.

ii. Two of the per-and polyfluoroalkyl substances (PFOS and PFOA) have a combined lifetime health advisory of 70 parts per trillion that is protective of sensitive populations.

When an EPA health advisory is exceeded, the notification with DEP will result in discussion regarding confirmation sampling as well as public notification requirements. Water systems are encouraged to contact DEP when raw water sample results exceed a health advisory level and treatment specific to the contaminant is not provided. Notification is recommended, so DEP can help assess the risk in the finished water and advise additional actions such as follow-up finished water sampling or investigation into the cause of the raw water contamination.

4. Any sample result is E. coli- positive. (109.701(a)(3)(iv)) Any time a laboratory notifies a water system that a sample result is *E. coli-positive,* one-hour notification to DEP is required. A single *E. coli-positive* result may not be a violation, but additional samples may be required. In the event of an *E. coli-positive* source water sample at a groundwater system without approved 4-log disinfection of viruses, there are no further samples needed, but a Boil Water Advisory should be issued. A routine distribution sample that is *E. coli-positive* requires the collection of check samples within 24 hours. If any of those check samples are positive, for *E. coli* or total coliform, the MCL has been exceeded. Alternatively, when a routine distribution sample is total coliform positive and one of the check samples is *E. coli-positive,* the MCL has been exceeded. When a sample is not tested for *E. coli* but is total coliform positive, it is assumed to be positive for *E. coli*. In all these cases, one-hour notification to DEP is required and more than likely Tier 1 Public Notice in the form of a Boil Water Advisory will be needed.

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VI. SUMMARY

A. Water systems should keep their DEP sanitarian contact information as well as the local DEP office information up-to-date. These are the numbers to call during daytime hours, 8 AM to 4 PM. Not all emergency situations, or even potential problems, occur during normal business hours. If one-hour notification is required outside of regular business hours, or if you are unable to directly contact your sanitarian during routine business hours, it is important to know how to contact DEP. The list of Regional and District Office phone numbers as well as the state-wide Emergency Response phone number can be found in the following document:

DEP Form # 3930-FM-BSDW0560

This document can be located in eLibrary by visiting this website http://www.depgreenport.state.pa.us/elibrary/Search, entering 3930-FM-BSDW0560 in the space below "Document Number" and then clicking "Search".

When calling the Emergency Response phone number, the water system should request to be called back by Safe Drinking Water program staff. The circumstances and situations discussed in this document require one-hour notification to DEP, which means talking to someone. Leaving a voicemail or sending an email for someone to see the next morning, or later, is not acceptable and does not meet the intended requirements of the regulations.

B. While all the above situations require notification to DEP within one hour of discovery, not all situations will require public notification. Once the situation is reported to DEP, Safe Drinking Water program staff will help you determine if public notification needs to occur and which notice is warranted for your situation. For further information on public notice, including available templates for your use, visit DEP's Public Notification website at:

https://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Public-Notification.aspx

In addition to the one-hour reporting requirements laid out in §109.701(a)(3), "certified operators shall report to the system owner known violations or system conditions that may be or are causing violations of Federal or State law or rules and regulations". This requirement is contained in Chapter 302 (Operator Certification Program), section §302.1201(c). System owners then have the responsibility under §302.1202(a)(4) to "take appropriate action in a timely manner in response to reports required by the certified operator." The system owner can decide that the operator should be the person that contacts DEP regarding the situation and performs any follow-up activities that are necessary.

It is important that water systems and DEP staff work together to resolve situations that have the potential to adversely affect water quantity or quality. Communication is key and it is always better to call DEP when in doubt.

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