United States Environmental Protection Agency
Office of Water (4606)
EPA 816-R-01-003
January 2001

Preparing Your Drinking Water Consumer Confidence Report

Revised Guidance for water suppliers

Working Draft for public review

Notice

This document provides guidance to water suppliers on EPA's current interpretation of the Consumer Confidence Report Rule. The guidance is designed to implement national policy on these issues. The document does not, however, substitute for EPA's regulations; nor is it a regulation itself. Thus, it cannot impose legally-binding requirements on EPA, states, or water suppliers, and may not apply to a particular situation based upon its circumstances. EPA and state decisionmakers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. EPA may change this guidance in the future.

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Contents

Introduction

This document is for water suppliers who are preparing the new drinking water Consumer Confidence Reports [40 CFR part 141 Subpart O]. This guide explains all of the requirements for report content, format, and distribution that the U.S. EPA established in the Consumer Confidence Report Rule, published in the FEDERAL REGISTER on August 19, 1998.

The rationale for consumer confidence reports (CCRs) is that consumers have the right to know what is in their drinking water and where that water comes from. The reports will help consumers to make informed choices that affect the health of themselves and their families. They also will encourage consumers to consider the challenges of delivering safe drinking water. Educated consumers are more likely to help protect their drinking water sources and to understand the true costs of safe drinking water.

Water suppliers, states, and EPA are all working to educate consumers about the sources and quality of their drinking water, and to increase their involvement in decisions about it. EPA is revising its public notification requirements to speed up notification of serious health threats and simplify notification of other violations. Systems and states are including citizens in decisions regarding use of the drinking water state revolving fund and in planning source water assessment programs. Consumers who are familiar with the basic drinking water information in CCRs will be able to participate more effectively in these processes.

I. What is a consumer confidence report?

In 1996, Congress amended the Safe Drinking Water Act. It added a provision requiring that all community water systems deliver to their customers a brief annual water quality report. CCRs summarize information that your water system already collects to comply with regulations. You will not need to engage in any new monitoring just for the CCR.

The CCR includes information on your source water, the levels of any detected contaminants, and compliance with drinking water rules, plus some educational material. Most reports will fit on a few sheets of paper. A report that contains *too much* information or is full of technical jargon can discourage consumers from learning about their drinking water.

II. Who must prepare a consumer confidence report?

Every community water system (serving at least 15 service connections and/or 25 people year round) must prepare and distribute a report. These systems typically include cities, towns, homeowners associations, and trailer parks.

A water wholesaler that sells water to another water system must provide the retailer with monitoring data and other information that will enable the retailer to produce a CCR, unless the two systems make a different contractual agreement. Wholesalers are not responsible for creating the report for the retailer, nor are they responsible for providing data on contaminants that the retailer monitors (such as lead or trihalomethanes). Regardless of who produces the report, the retail system is responsible for ensuring that its customers receive a report containing all required content.

In some cases, a retailer will contract with the wholesaler to produce the report. There are several options in this relationship. If the retailer had no new data to add, it could simply

send out the wholesaler's CCR with a cover letter explaining their relationship. If the retailer did need to add data, it might choose to reprint the wholesaler's CCR with a new title/letterhead and extra data. Either of these is acceptable.

III. When must a water system distribute its report?

You must deliver your first report to consumers by October 19, 1999. The reports are based on calendar-year data, so your first report will include data collected between January-December 1998. In 2000 and the years following, your system must deliver its report to consumers by July 1.

Wholesalers must deliver information to their buyers by April 1999 (unless there is a separate agreement), and annually thereafter. A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation, and annually thereafter.

IV. What content is required in the report?

This guidance describes EPA's requirements for a CCR and suggests (using the words "we encourage," "should," and "may") other sections or explanations that will help your customers understand the report. Your state's CCR rule may require more information, so be sure to check with your state drinking water program.

Basic Consumer Confidence Report Requirements *(please read on for details and recommended enhancements)*
water system information • name/phone number of contact person • information on public participation opportunities • information for non-English speaking populations, if applicable
sources of water • type, name, and location of water sources • availability of source water assessment • information on significant sources of contamination, if available
definitions: MCL, MCLG, others as needed
detected contaminants • table summarizing data on detected regulated & unregulated contaminants • known or likely source of each detected contaminant • [for MCL violations] health effects language and explanation • information on *Cryptosporidium*, radon, and other contaminants, if applicable
compliance with other drinking water regulations • explanation of violations, potential health effects, and steps taken to correct the violations • explanation of variance/exemption, if applicable
required educational information • explanation of contaminants and their presence in drinking water • warning for vulnerable populations about *Cryptosporidium* • informational statements on arsenic, nitrate, and lead, if necessary

EPA encourages you to tailor the content of your CCR to local conditions. If you think that an added picture or graph would help your customers to understand your report, add it. If your customers would benefit from an explanation of your need for new treatment facilities, tell them. As long as any additional educational information is consistent with, and not detracting from, the purpose of the report, you may add it. For example, the CCR rule does not require a title for your report. However, you should give your report a title to catch the customer's attention. You may call the report a "consumer confidence report," a "water quality report," or choose another title.

Customers are most interested in a clear statement of whether or not their drinking water meets all EPA and state standards. Although it is not required by the regulations, you will help your customers if you tell them whether their water met all drinking water standards. Be cautious in using the word "safe" since water that meets standards and is safe for most people might not be safe for infants, chemotherapy patients, or people with HIV/AIDS.

EXAMPLE–Last year, as in years past, your tap water met all EPA and state drinking water health standards. Local Water vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or of any other water quality standard. [**or, if you had a violation, begin with**: *Last year, we conducted more than __ tests for over 80 contaminants. We only detected __ of those contaminants, and found only __ at a level higher than EPA allows. As we told you at the time, our water temporarily exceeded drinking water standards. For more information, see the paragraph marked* ***Violation*** *on the back.*] *This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to EPA and state standards. We are committed to providing you with information because informed customers are our best allies.*

Item 1: Water system information

Identify the name of your system, and provide the following information about it:

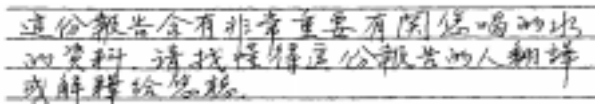
- The name and telephone number of a person at the water system who can answer questions about the report.
- A list of known opportunities for public participation in decisions that affect drinking water quality (e.g., time and place of regularly-scheduled water board or city/ county council meetings). If you do not have regularly-scheduled meetings, tell customers how to get information when meetings are announced.

Systems that have a large proportion of *non-English speaking residents* must include information in the appropriate language expressing the importance of the report or offering additional information in that language. The state will make the final determination of which systems need to include this information.

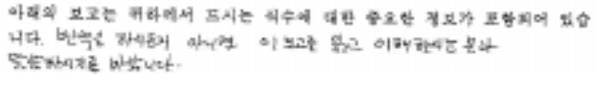
EXAMPLE–This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

–Spanish–Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

–Korean–



–Chinese–



–French–Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

Item 2: Source(s) of water

Describe your water (ground water, surface water, or a blend), and the commonly-used name(s) (if such a name exists) and locations of your water source(s). We encourage you to provide a simple map of your system's sources.

Explaining your various interconnections and back-up sources may be difficult, but it is important that consumers understand that the source of their water may vary during the year. Remember to include in your table of detected contaminants monitoring data for these "extra" sources if you use water from them. If your situation is complex, you may need to work with someone from your state drinking water program to decide what information belongs in your report.

If a source water assessment has been completed, tell customers where to get a copy. If you have received your source water assessment, include in the report a brief summary of your source water's susceptibility to contamination based on the findings of the source water assessment. The state should develop this summary as part of the source water assessment process and provide it to you, or you may write it yourself.

If you do not have information from the source water assessment, we encourage you to include any other information about potential sources of contamination that is readily available to you; for example, information contained in a sanitary survey. This is your opportunity to educate your customers about the impacts that they and others have on the quality of their source water. You may want to provide pollution prevention tips or information on local watershed cleanup activities.

Item 3: Definitions

Every CCR must include definitions of key terms that consumers will need to understand the contaminant data. You must use the definitions listed below.

- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

- **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

- **Maximum Residual Disinfectant Level (MRDL)**: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

- **Maximum Residual Disinfectant Level Goal (MRDLG)**: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Include the following definitions only if your report contains information on a detected contaminant that is regulated by an action level (e.g., lead) or a treatment technique (e.g., turbidity):

- **Treatment Technique**: A required process intended to reduce the level of a contaminant in drinking water.

- **Action Level**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Include the following definition only if your water system operated under a variance or exemption during the calendar year that the report describes:

- **Variances and Exemptions**: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Item 4: Detected contaminants

An essential part of the report is the table that shows the highest level of each detected contaminant (this is usually the value you report to the state to determine compliance) and the range of levels of that contaminant you found during the year, if compliance is based on an average of several samples.

A detected contaminant is any contaminant detected at or above its minimum detection limit (MDL). (See Appendix B) If you are unsure of the MDL for a contaminant, and your lab reports a value greater than zero, include that in the report. Your state may have lower MDLs that take precedence over EPA's. Do not include in the table contaminants that are not detected or are detected below the MDL. If you sometimes distribute water from emergency or back-up sources, you generally need to include monitoring results from these sources in the ranges of detections that you report in the table, unless the source's contribution is insignificant (e.g., one day per year).

The main table of detected contaminants must contain only data about regulated contaminants (contaminants subject to a MCL, treatment technique (TT), or action level (AL)), and unregulated contaminants for which EPA or the state requires monitoring under 40 CFR 141.40 or the Information Collection Rule (ICR). See below for special instructions about *Cryptosporidium* and radon. You may make several tables to separate regulated contaminants from those that do not have MCLs, such as ICR contaminants. You may want to organize your table(s) by contaminant type (e.g., microbial, inorganic) or sampling site (e.g., treatment plant, distribution system). Report any additional monitoring data in another section of the CCR, separated from the regulated contaminant data. If you want to list all the contaminants which you monitored but did not detect, you must do so outside of the table of detected contaminants. If you choose to report on secondary MCLs, or if your state requires this reporting, do so outside of the main table.

To ensure that consumers can easily compare detected contaminant levels to their MCLs, your table must display the MCL for each contaminant in units that express it as a number greater than 1.0. Report the MCLG and level of the detected contaminant in the same units as the MCL. For example, atrazine is usually reported in mg/l. It is easier for customers to see that your water contains atrazine at a level 10 times lower than the MCL if you report the MCL as 3 ppb and the detected level as 0.3 ppb than if you were to report the MCL as 0.003 mg/l and the detected level as 0.0003 mg/l. In this case, you convert by multiplying the detected level and MCL by 1000. Appendix A shows the conversion factor for each contaminant. When you round results to determine compliance, round before multiplying the results by the factor listed in Appendix A.

The CCR includes data from monitoring completed during the past calendar year. However, if you have monitoring waivers, or for another reason monitor less than once per year, use your most recent data. For example, if you monitor once every three years for lindane and

detect lindane in a sample, report the same detection level each of the three years until you take a new sample. If the report contains detection data that is not from the calendar year indicated, the table must show the date of monitoring and the report must contain a brief statement explaining that the data presented is from the most recent monitoring done in compliance with regulations.

EXAMPLE–The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

You do not need to report monitoring results that are more than five years old. Report the results of Information Collection Rule monitoring only for five years from the date of the last sample or until the detected contaminant becomes regulated and subject to regular monitoring, whichever comes first.

The table must contain, for each detected contaminant:

(1) the MCL, expressed as a number greater than 1.0 (see Appendix A). If the contaminant is regulated by a TT, put the letters "TT" in place of the MCL. If the contaminant is regulated by an AL, specify the applicable Action Level.

(2) the MCLG, expressed in the same units as the MCL (see Appendix A).

(3) the level of that contaminant expressed in the same units as the MCL and MCLG:

- if compliance is determined annually or less frequently (many inorganic and chemical contaminants), include the highest detected level at any sampling point and the range of detected levels, if applicable.

- if compliance is determined by a running annual average of all the samples taken from a sampling point (for example, chemical contaminants), include the highest average (as reported to the state for compliance purposes) and the range of detections. (See Appendix C)

- if compliance is determined by a running annual average of all samples at all sampling points (for example, TTHMs), include the highest average and the range of detected levels. (See Appendix C)

- for turbidity (when reported pursuant to 40 CFR 141.13–turbidity as a MCL for systems that must install filtration but haven't), include the highest monthly average.

- for turbidity (when reported pursuant to 40 CFR 141.71–turbidity as a TT for systems that have met criteria for avoiding filtration), include the highest single measurement found in any month. You should explain the reasons for measuring turbidity.

EXAMPLE–Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

- for turbidity (when reported pursuant to 40 CFR 141.73 –turbidity as a TT for systems that filter and use turbidity as an indicator of filtration performance), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 141.73 for the relevant filtration technology. (See Appendix C) Beginning with your 2003 report, report turbidity based on the revised requirements in 141.173. You should explain the reasons for measuring turbidity.

EXAMPLE–Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

- for lead and/or copper, include the 90th percentile value from the most recent sampling (if it is a number greater than zero) and the number of sites that exceeded the action level.

Do not report related parametric data.

- for total coliforms (systems that collect fewer than 40 samples per month), include the highest number of positive samples collected in any one month.

- for total coliforms (systems that collect 40 or more samples per month), include the highest percentage of positive samples collected in any one month.

- for fecal coliforms and *E. coli*, include the number of positive samples taken that year.

- If you detect beta particles in your water at or below 50 pCi/l, you should report the detected level in pCi/l. So that consumers may have a standard against which to compare that detected level, include "50*" in the MCL column (rather than the actual MCL of 4 mrem/year) and include a footnote to the table that says "*EPA considers 50 pCi/l to be the level of concern for beta particles." If you detect beta particles above 50 pCi/l, you must determine the actual radioactive constituents present in the water to calculate the dose exposure level in mrem/ year, and must report both the detected level and MCL as mrem/year.

(1) the likely source of that contaminant, to the best of your knowledge. If you have reliable information, the report should identify a specific point source, such as "Al's chicken houses" or the "Super-shiny Paper Mill". If you lack reliable information on the specific source of a contaminant, include one or more of the typical sources listed in Appendix B that is most applicable to your situation.

(2) for any contaminant detected in violation of a MCL or a TT, or exceeding an AL, clearly highlight in the table the violation or exceedence. This indication could, for example, take the form of a different color type, a larger or bolder font, or a large star. Near, but not in, the table, include an explanation of the length of the violation/ exceedence, the potential adverse health effects (from Appendix A), and actions you took to address the violation/exceedence.

(3) If you've detected unregulated contaminants for which state or federal rules require monitoring (for example, the ICR or 40 CFR 141.40), except *Cryptosporidium*, include the average of all of the year's monitoring results and the range of detections. See Appendix A for a list of these contaminants.

We encourage you to include more information on the potential health effects of these contaminants if the results may indicate a health concern. We consider any detection above a proposed MCL or health advisory level to indicate concern. You can call the Safe Drinking Water Hotline (800-426-4791) for this information or find it on EPA's web site at www.epa.gov/safewater/hfacts.html. For these contaminants, EPA recommends that the report contain an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

You may wish to explain the reasons for unregulated contaminant monitoring with a statement like the following.

EXAMPLE–Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Multiple distribution systems

If your system supplies water through two or more distribution systems that use different raw water sources and are not physically interconnected, you may want to include in the table a separate column of detection data for each service area. Describe the area that each distribution system serves.

Reporting on *Cryptosporidium* and radon

If you monitored for *Cryptosporidium* and/or radon and did not detect them, you do not need to discuss the monitoring or the results in your report. If your system has performed monitoring that indicates the presence of radon in its finished water, include in the report:

- the results of monitoring (the analytical values reported by the lab).

- an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

EXAMPLE--Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Note: ***In 2001, EPA expects to promulgate a new Radon Rule which will set a new standard for radon in drinking water. This CCR provision will remain in effect until CWSs have completed the initial monitoring requirements specified in the new rule.***

If your system has performed monitoring that indicates the presence of *Cryptosporidium* either in its source water or its finished water, include the following information in your report:

- a summary of the results of the monitoring. You may choose whether or not to report the actual analytical results as a part of this summary.

- an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

EXAMPLE–Cryptosporidium *is a microbial pathogen found in surface water throughout the U.S. Although filtration removes* cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of* cryptosporidium *may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.* Cryptosporidium *must be ingested to cause disease, and it may be spread through means other than drinking water.*

Reporting on additional monitoring

If your system has performed voluntary monitoring that indicates the presence of non-regulated contaminants in the finished water, we strongly encourage you to report any results that may indicate a health concern. Public knowledge of potential problems is in the interest of you and your customers. We consider any detection above a proposed MCL or health advisory level to indicate concern. Call the Safe Drinking Water Hotline or visit EPA's web site for this information. For these contaminants, EPA recommends that the report contain:

- the results of monitoring
- an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

Item 5: Compliance with other drinking water regulations

If your water system violated one of the following rules during the year covered by the report, your CCR must describe the violation(s). Just as you must explain the potential health effects of any MCL violation, you must provide a clear and readily understandable explanation of any other violation, potential adverse health effects (if any), and the steps the system has taken to correct the violation.

- Treatment techniques

  (1) Filtration and disinfection (Surface Water Treatment Rule requirements). If the violation was a failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, include the following language:

  Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

  (2) Lead and copper control requirements. If the violation was a failure to meet corrosion control treatment, source water treatment, or lead service line requirements, include the health effects language for lead or copper listed in Appendix A.

  (3) Acrylamide and Epichlorohydrin--If you violate either treatment technique, you must include the relevant health effects language from Appendix A.

- Monitoring and reporting of compliance data. If your system failed to take the sample on time, the report should say "health effects unknown". If your system took the samples accurately and on-time, but mailed the results late, you don't need to discuss health effects.
- Record keeping requirements
- Special monitoring requirements
- Violation of a variance, an exemption, or an administrative or judicial order

<u>Variances and Exemptions</u>

If your system operated under a variance or exemption at any time during the year covered by the report, include an explanation of the variance or exemption, the date that it was issued, why it was granted, when it is up for renewal, and a status report on what the system is doing to remedy the problem. Also, tell your customers how they may participate in the review of the variance or exemption.

Item 6: Educational information

Your CCR must prominently display the following statements:

(1) *Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).*

(2) *Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by* Cryptosporidium *and other microbial contaminants are available from the Safe Drinking Water Hotline(1-800-426-4791).*

Your report must contain basic information about drinking water contaminants. Use the following language, or you may write your own comparable language that better fits your specific local situation:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*

- *Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*

- *Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*

- *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.*

- *Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Special requirements for Nitrate, Lead, Arsenic, and Trihalomethanes

If your water contains:

- **Nitrate** above 5 ppm (50 % of the MCL), but below 10 ppm (the MCL);
- **Arsenic** above 25 ppb (50 % of the MCL), but below 50 ppb (the MCL); and/or
- **Lead** above 15 ppb (the Action Level) in more than 5%, and up to and including 10%, of sites sampled [if your system samples fewer than 20 sites and has even one sample above the AL, include the standard explanation for an AL exceedence],

you must include in your report the relevant special educational statement listed below about that contaminant.

Nitrate: *Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.*

Arsenic: *EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations.*

Note: ***In 2001, EPA expects to promulgate an Arsenic Rule, which will set a new, more stringent standard for arsenic in drinking water. Upon promulgation of the arsenic rule, this provision will be amended***

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Lead: *Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).*

If you believe that the language above is not relevant to your situation, you may adjust the language in consultation with your state.

Trihalomethanes

If your system has a running annual average for trihalomethanes above 80 ppb (the new MCL set by the Stage 1 Disinfectant/ Disinfection Byproducts Rule that is not in effect till 2001) but below the current MCL of 100 ppb, you must include the health effects statement for TTHMs contained in Appendix C. You should explain to your customers how you plan to reduce this level.

Other educational information

You are not limited to providing only the required information in your report. You may use the report to explain (or include a diagram of) your treatment processes, source water protection efforts, or the costs of your making water safe to drink. You may include a statement from the mayor or general manager. Or you could educate your customers about water conservation, taste and odor issues, affiliations with programs such as the Partnership for Safe Water, and so forth. You may want to provide the address for EPA's drinking water web site (www.epa.gov/ safewater/). The only limitation on this information is that it must not interfere with the educational purpose of the report.

V. What should the report look like?

You don't need a fancy computer or a graphic designer to produce a CCR that is easy to read and inviting to your customers. The best way to design your report is to spend some time looking at other reports. See what catches your eye, and copy it. A few things to consider:

★ Write short sentences. Keep your paragraphs short, too.

★ Don't make your text size too small. You might want to squeeze a few extra sentences in your report, but if you add too much, people might ignore the entire report.

★ Give a draft of your CCR to relatives or friends who aren't drinking water experts and ask them if it makes sense. Ask customers for their comments when you publish the report.

★ Don't distract from your main message with graphics and/or pictures that don't complement your message.

★ Be as simple and straight forward as possible. Avoid acronyms, initials, and jargon.

★ Consider printing the report on recycled paper and taking other steps to make the report "environmentally friendly". If you hope to get your customers involved in protecting source water, set a good example for them.

VI. How must a water system distribute its report?

You must mail or deliver a copy of your consumer confidence report to each of your customers, and make a good faith effort to get reports to non-bill-paying consumers. Deliver your first report by October 19, 1999, and your reports in years after that by July 1. You may include the reports with water bills, if feasible, or you may send the reports as separate mailers. Keep your report on file for five years, and make it available to the public upon request.

Send a copy to the director of the state drinking water program when you mail it to customers. Within three months of the report's due date, submit to the state a certification (see Appendix D) that you distributed the report, and that its information is correct and consistent with the compliance monitoring data previously submitted to the State. Send a copy to any other state agency that the state drinking water program director identifies. We also encourage you to send copies to state and local health departments, as well as local TV and radio stations and newspapers. Systems that serve 100,000 or more people must post their reports on the Internet.

It is in your system's interest to spread the word about the quality of its water. Since many consumers of your water may not receive bills (people such as apartment renters), you must make serious and "good faith" efforts to reach non-bill paying consumers. A "good faith" effort means selecting the most appropriate method(s) to reach those consumers from a menu of options that your primacy agency recommends. Those options include but are not limited to:

- posting the report on the Internet
- mailing the report to all postal patrons
- advertising the availability of the report in newspapers, TV, and radio
- publishing the report in a local newspaper
- posting the report in public places such as cafeterias of public buildings, libraries, churches, and schools
- delivering multiple reports for distribution by single-biller customers such as apartment buildings or large private employers
- delivering the report to community organizations

Your Governor (or Tribal leader or EPA Regional Administrator in some cases) can waive the mailing requirement for water systems that serve fewer that 10,000 people. You may choose to mail the report even if the Governor has issued a waiver. If you decide to use the waiver, take the following steps:

- Publish the report in one or more local newspapers
- Inform customers, either by notification in newspapers or by other means approved by the State, that reports will not be mailed
- Make the reports available upon request

If your system serves 500 or fewer people and the Governor waives the mailing requirement for small systems, you do not have to publish the report in the newspaper, though you may want to do so. At least once a year, you must notify customers through a mailed, delivered, or posted notice that the report is available from your water system upon request.

Systems that serve 100,000 or more people must post their reports on the Internet. EPA encourages other systems to post their reports as well. Many local governments have sites where you could post your report, even if your system itself does not have a site. EPA will make links from its website (www.epa.gov/safewater/) to all the reports of which it is aware.

Appendix A - Regulated Contaminants

The CCR Rule promulgated on August 19, 1998 (63 FR 44511) contained Appendices A, B, and C to Subpart O which provided information about contaminants EPA regulates. Information included conversions for MCL compliance values, likely sources of contaminants, and health effects language for contaminants detected above federal standards. The revised Public Notification (PN) Rule published in the *Federal Register* on May 4, 2000 (65 FR 25982) amended the CCR Rule by deleting Appendices A, B, and C to Subpart O and combining the information into one new, comprehensive Appendix A to Subpart O.

The Radionuclides Rule published in the *Federal Register* on December 7, 2000 (65 FR 76708) also updated the new Appendix A to Subpart O by adding information for uranium. A summary of the changes made by the PN and Radionuclides Rules are listed below. Appendix A to Subpart O is presented on the following pages.

Appendix A to Subpart O - Summary of Changes:

The PN and CCR rules have some parallel requirements and changes were made to better align the CCR Rule with the PN Rule. For example, both rules now use the same mandatory language to describe potential health effects of violations. Changes to the CCR Rule became effective June 5, 2000. A summary of the changes made by the PN Rule to the Appendices of Subpart O are given below:

- Appendices A, B, and C to Subpart O, which contain various pieces of information about the contaminants EPA regulates, are deleted and the information is combined into a new, comprehensive Appendix A to Subpart O. As a result of this change, an number of references in the CCR Rule to the three appendices are revised to reflect the new combined Appendix A. As new rules are promulgated, they may change the information in Appendix A. EPA will maintain an updated version of Appendix A on its website at: www.epa.gov/safewater/tables.html. This will eliminate the need to republish the entire table in each final rule that changes the information it contains.

- The new Appendix A to Subpart O contains regulatory and health effects information on each of the disinfectants and disinfection byproducts regulated in the Stage 1 D/DBP Rule that EPA published in December 1998. Although systems will not be required to include information on these contaminants in their CCRs until after the effective date of the new State 1 D/DBP regulations, some systems may choose to do so earlier. EPA added information on the following regulated contaminants to the CCR Rule:

1)	total organic carbon	5)	chlorite
2)	bromate	6)	chlorine dioxide
3)	chloramines	7)	haloacetic acids
4)	chlorine		

- The standard health effects language for fluoride in the current CCR regulations is revised to be identical to the health effects language required for violation of the fluoride MCL in the PN Rule.

The Radionuclides Rule updated the new Appendix A to Subpart O by adding MCL, health effects, and likely source information for uranium.

APPENDIX A TO SUBPART O – REGULATED CONTAMINANTS

Key
AL=Action Level
MCL=Maximum Contaminant Level
MCLG=Maximum Contaminant Level Goal
MFL=million fibers per liter
mrem/year=millirems per year (a measure of radiation absorbed by the body)
NTU=Nephelometric Turbidity Units
pCi/l=picocuries per liter (a measure of radioactivity)
ppm=parts per million, or milligrams per liter (mg/l)
ppb=parts per billion, or micrograms per liter (μg/l)
ppt=parts per trillion, or nanograms per liter
ppq=parts per quadrillion, or picograms per liter
TT=Treatment Technique

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
Total Coliform Bacteria	MCL: (systems that collect ≥40 samples/ month) 5% of monthly samples are positive; (systems that collect < 40 samples/ month) 1 positive monthly sample			0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and *E. coli*	MCL: a routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive			0	Human and animal fecal waste	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.
Total Organic Carbon	TT	-	TT	n/a	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Turbidity	TT	-	TT	n/a	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Radioactive Contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	-	4	0	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/l)	15 pCi/l	-	15	0	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/l)	5 pCi/l	-	5	0	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (pCi/l)	30 μg/l	-	30	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Inorganic Contaminants						
Antimony (ppb)	.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	.05	1000	50	n/a	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL	-	7	7	Decay of asbestos cement water mains; Erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	-	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper (ppm)	AL=1.3	-	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	.2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4	-	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth., and occurs only in developing teeth before they erupt from the gums..
Lead (ppb)	AL=.015	1000	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (ppm)	10	-	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1	-	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Synthetic Organic Contaminants including Pesticides and Herbicides						
2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex](ppb)	.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Acrylamide	TT	-	TT	0	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAH] (nanograms/l)	.0002	1,000,000	200	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	.4	1000	400	400	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Epichlorohydrin	TT	-	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclo-pentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	.0005	1,000,000	500	0	Runoff from landfills; Discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile Organic Contaminants						
Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Bromate (ppb)	0.010	1000	10	0	By-product of drinking water chlorination	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chloramines (ppm)	MRDL=4	-	MRDL=4	MRDLG=4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL=4	-	MRDL=4	MRDLG=4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Chlorite (ppm)	1	-	1	0.8	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine Dioxide (ppb)	MRDL=.8	1000	MRDL=800	MRDLG=800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-Dichlorobenzene (ppb)	.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb)	.1	1000	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb)	.060	1000	60	n/a	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories; Leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
Tetrachloroethylene (ppb)	.005	1000	5	0	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalomethanes] (ppb)	.10	1000	100	n/a	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	-	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

Contaminant (units)	traditional MCL in mg/L	to convert for CCR, multiply by	MCL in CCR units	MCLG	Major Sources in Drinking Water	Health Effects Language
Vinyl Chloride (ppb)	.002	1000	2	0	Leaching from PVC piping; Discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10	-	10	10	Discharge from petroleum factories; Discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Unregulated contaminants for which EPA requires monitoring in 141.40:

<u>Note</u>: In September 1999, EPA revised the Unregulated Contaminant Monitoring Rule (UCMR) (64 FR 50556) as required by the 1996 Amendments to SDWA. As of January 1, 2001, systems are no longer required to monitor for the contaminants shown below to comply with UCMR. Information on the revised UCMR monitoring list is given on the following pages.

Aldicarb	Butachlor	p-Chlorotoluene	Dieldrin	Propachlor
Aldicarb sulfone	sec-Butylbenzene*	Dibromomethane	Fluorotrichloromethane*	n-Propylbenzene*
Aldicarb sulfoxide	n-Butylbenzene*	Dicamba	Hexachlorobutadiene*	Sulfate
Aldrin	tert-Butylbenzene*	m-Dichlorobenzene	3-Hydroxycarbofuran	1,1,1,2-Tetrachloroethane
Bromobenzene	Carbaryl	Dichlorodifluoromethane*	Isopropylbenzene*	1,1,2,2-Tetrachloroethane
Bromochloromethane*	Chlorodibromomethane	1,1-Dichloroethane	p-Isopropyltoluene*	1,2,3-Trichlorobenzene*
Bromodichloromethane	Chloroethane	2,2-Dichloropropane	Methomyl	1,2,3-Trichloropropane
Bromoform	Chloroform	1,3-Dichloropropane	Metolachlor	1,2,4-Trimethylbenzene*
Bromomethane (methyl bromide)	Chloromethane	1,1-Dichloropropene	Metribuzin	1,3,5-Trimethylbenzene*
	o-Chlorotoluene	1,3-Dichloropropene	Naphthalene*	

[*regulations do not require monitoring for these contaminants in all states]

ICR microbial contaminants that suppliers must report in the CCR contaminant table (if found in finished water) are: total coliforms, fecal coliforms or *Escherichia coli*, *Giardia*, and total culturable viruses. Report *cryptosporidium*, whether found through ICR monitoring or any other monitoring of raw or finished water, outside of the table according to the guidelines in 141.153(e)(1).

ICR disinfection by-products that suppliers must report in the CCR (if found in finished water) are:

for all treatment plants participating in the ICR monitoring:

~ THM4: report trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group
~ HAA5: report haloacetic acids (mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid) as a group
~ HAN: report haloacetilenitriles(dichloro-, trichloro-, bromochloro-, and dibromoacetonitrile) as a group
~ HK: report haloketones (1,1-dichloropropanone and 1,1,1-trichloropropanone) as a group
~ CP (chloropicrin)
~ CH (chloral hydrate)
~ TOX (total organic halides)
~ Disinfectant Residual

for treatment plants using:
Chloramines.....Cyanogen Chloride
Hypochlorite Solutions.....Chlorate
Ozone.....Bromate, Aldehydes
Chlorine Dioxide.....Chlorine Dioxide residual, Chlorite, Chlorate, Bromate, Aldehydes

Revised UCMR Monitoring List

In September 1999, EPA revised the Unregulated Contaminant Monitoring Rule (UCMR) (64 FR 50556) as required by the 1996 Amendments to SDWA. The data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants that EPA is considering for possible new drinking water standards. This data will help to ensure that future decisions on drinking water standards are based on sound science.

The revised UCMR contains a new list of contaminants for which public water systems must monitor. The UCMR Monitoring List is composed of three separate lists based on analytical methods readiness and current contaminant occurrence data. List 1 for Assessment Monitoring includes twelve chemical contaminants for which analytical methods exist or will soon be established. List 2 for Screening Survey contains contaminants for which analytical methods are under development and for which EPA has less occurrence data than the contaminants on List 1. List 3 for Pre-Screen Testing includes seven microorganisms known to have health effects and one inorganic chemical. While the UCMR Monitoring List has 36 contaminants on it, the regulation only requires monitoring for the twelve contaminants on List 1, beginning in 2001. The revised UCMR Monitoring List, along with information about likely sources of those contaminants is presented on the next page. The EPA website (http://www.epa.gov/safewater/ucmr.html) contains additional information on the revised rule.

The CCR Rule requires a system to provide in their CCR the average of any monitoring results from the year and the range of detections for each detected unregulated contaminant for which monitoring is required. Systems are encouraged to include a brief explanation of the reasons for monitoring for unregulated contaminants. EPA provided the following language in Section IV, Item 4 of this guidance:

> *Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.*

EPA also encouraged systems to provide more information on the potential health effects of these contaminants if the results indicate a health concern. EPA considers any detection above a proposed MCL or health advisory level to indicate concern. The EPA Safe Drinking Water Hotline (800-426-4791) and EPA website (http://www.epa.gov/safewater/hfacts.html) are resources for this information.

Uses and Environmental Sources of Contaminants for the Final (1999) UCMR Monitoring List **		
Contaminant Name	**CASRN**	**Use or Environmental Source**
List 1 - Assessment Monitoring of Contaminants with Available Methods		
2,4-dinitrotoluene	121-14-2	Used in the production of isocyanate and explosives
2,6-dinitrotoluene	606-20-2	Used as a mixture with 2,4-DNT (similar uses)
DCPA mono-acid degradate	887-54-7	Degradation product of DCPA, an herbicide used on grasses and weeds with fruit and vegetable crops
DCPA di-acid degradate	2136-79-0	Degradation product of DCPA, an herbicide used on grasses and weeds with fruit and vegetable crops
4,4'-DDE	72-55-9	Degradation product of DDT, a general insecticide
EPTC	759-94-4	Herbicide used on annual grasses, weeds, in potatoes and corn
Molinate	2212-67-1	Selective herbicide used with rice, controls watergrass
MTBE	1634-04-4	Octane enhancer in unleaded gasoline
Nitrobenzene	98-95-3	Used in the production of aniline, which is used to make dyes, herbicides, and drugs
Terbacil	5902-51-2	Herbicide used with sugarcane, alfalfa, and some fruit, etc.
Acetochlor	34256-82-1	Herbicide used with cabbage, citrus, coffee, and corn crops
Perchlorate	14797-73-0	Oxygen additive in solid fuel propellent for rockets, missiles, and fireworks
List 2 - Screening Survey of Contaminants Projected to Have Methods by Date of Program Implementation		
Diuron	330-54-1	Herbicide used on grasses in orchards and wheat crops
Linuron	330-55-2	Herbicide used with corn, soybean, cotton, and wheat crops
Prometon	1610-18-0	Herbicide used on annual and perennial weeds and grasses.
2,4,6-trichlorophenol	88-06-02	By-product of fossil fuel burning, used as bactericide and wood glue preservative
2,4-dichlorophenol	120-83-2	Chemical intermediate in herbicide production
2,4-dinitrophenol	51-28-5	Released from mines, metal, and petroleum plants
2-methyl-phenol	95-48-7	Released in automobile and diesel exhaust, coal tar and petroleum refining, and wood pulping
Alachlor ESA	- - - - - - - - -	Degradation product of alachlor, an herbicide used with corn, bean, peanut, and soybean crops to control grasses and weeds.

Uses and Environmental Sources of Contaminants for the Final (1999) UCMR Monitoring List **		
Contaminant Name	**CASRN**	**Use or Environmental Source**
1,2-diphenylhydrazine	122-66-7	Used in the production of benzidine and anti-inflammatory drugs
Diazinon	333-41-5	Insecticide used with rice, fruit, vineyards, and corn crops
Disulfoton	298-04-4	Insecticide used with cereal, cotton, tobacco, and potato crops
Fonofos	944-22-9	Soil insecticide used on worms and centipedes
Terbufos	13071-79-9	Insecticide used with corn, sugar, beet, and grain sorghum crops.
Aeromonas Hydrophilia	N/A	Present in all freshwater and brackish water
Polonium-210 (Po-210)	13981-52-7	Part of the uranium decay series, naturally occurring
RDX	121-82-4	Used in explosives, ammunition plants
List 3 - Pre-Screen Testing of Contaminants Needing Research on Methods		
Algae and Toxins	N/A	Bloom in surface water bodies; produce toxins
Echoviruses	N/A	Fecal sources; hand to mouth transmission
Coxsackieviruses	N/A	Fecal sources; hand to mouth transmission
Heliobacter pylori	N/A	Fecal sources; hand to mouth transmission
Microsporidia	N/A	Occur in rivers, ponds, lakes, and unfiltered water
Caliciviruses	N/A	Contaminated food and water, raw shellfish
Adenoviruses	N/A	Fecal sources; hand to mouth transmission
Lead-210 (Pb-210)	14255-04-0	Part of the uranium decay series, naturally occurring

** Taken from the Unregulated Contaminant Monitoring Rule (UCMR) published in the *Federal Register* on September 17, 1999 (64 FR 50556), pages 50562-50564 and 50574.

APPENDIX B–U.S. EPA'S MINIMUM DETECTION LIMITS

Note: these detection limits for your information. They are U.S. EPA's Minimum Detection Limits, codified at 40 CFR 141.23-141.25. Your state may have different detection limits that take precedence. If you are uncertain about the inclusion of certain data, talk to your primacy agency. Some contaminants, such as lead, copper, and ICR contaminants aren't listed below. If you can't find a contaminant listed below and your lab analysis provides a detected value for that contaminants, report it in your CCR. If you're uncertain, always provide too much data rather than too little.

Contaminant	Method	Detection limit (mg/l)
Inorganic Contaminants [40 CFR 141.23(a)(4)]		
Antimony	Atomic Absorption; Furnace	0.0003
	Atomic Absorption; Platform	0.0008
	ICP-Mass Spectrometry	0.0004
	Hydride-Atomic Absorption	0.001
Asbestos	Transmission Electron Microscopy	0.01 MFL
Barium	Atomic Absorption; furnace technique	0.002
	Atomic Absorption; direct aspiration	0.1
	Inductively Coupled Plasma	0.002 (0.001)
Beryllium	Atomic Absorption; Furnace	0.0002
	Atomic Absorption; Platform	0.00002
	Inductively Coupled Plasma	0.0003
	ICP-Mass Spectrometry	0.0003
Cadmium	Atomic Absorption ; furnace technique	0.0001
	Inductively Coupled Plasma	0.001
Chromium	Atomic Absorption; furnace technique	0.001
	Inductively Coupled Plasma	0.007 (0.001)
Cyanide	Distillation, Spectrophotometric	0.02
	Distillation, Automated, Spectrophotometric	0.005
	Distillation, Selective Electrode	0.05
	Distillation, Amenable, Spectrophotometric	0.02
Mercury	Manual Cold Vapor Technique	0.0002
	Automated Cold Vapor Technique	0.0002
Nickel	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0006
	Inductively Coupled Plasma	0.005
	ICP-Mass Spectrometry	0.0005
Nitrate	Manual Cadmium Reduction	0.01
	Automated Hydrazine Reduction	0.01
	Automated Cadmium Reduction	0.05
	Ion Selective Electrode	1
	Ion Chromatography	0.01
Nitrite	Spectrophotometric	0.01
	Automated Cadmium Reduction	0.05
	Manual Cadmium Reduction	0.01
	Ion Chromatography	0.004
Selenium	Atomic Absorption; furnace	0.002
	Atomic Absorption; gaseous hydride	0.002
Thallium	Atomic Absorption; Furnace	0.001
	Atomic Absorption; Platform	0.0007
	ICP-Mass Spectrometry	0.0003
Volatile Organic Contaminants [40 CFR 141.24(f)(7)]		
Vinyl chloride	502.2; 524.2	0.0005
Benzene	502.2; 524.2	0.0005
Carbon tetrachloride	502.2; 524.2; 551	0.0005
1,2-Dichloroethane	502.0; 524.2	0.0005
Trichloroethylene	502.2; 524.2; 551	0.0005
para-Dichlorobenzene	502.0; 524.2	0.0005
1,1-Dichloroethylene	502.2; 524.2	0.0005
1,1,1-Trichloroethane	502.2; 524.2	0.0005

Contaminant	Method	Detection limit (mg/l)
cis-1,2-Dichloroethylene	502.2; 524.2	0.0005
1,2-Dichloropropane	502.2; 524.2	0.0005
Ethylbenzene	502.2; 524.2	0.0005
Monochlorobenzene	502.2; 524.2	0.0005
o-Dichlorobenzene	502.2; 524.2	0.0005
Styrene	502.2; 524.2	0.0005
Tetrachloroethylene	502.2; 524.2; 551	0.0005
Toluene	502.2; 524.2	0.0005
trans-1,2-Dichloroethylene	502.2; 524.2	0.0005
Xylenes (total)	502.2; 524.2	0.0005
Dichloromethane	502.2; 524.2	0.0005
1,2,4-Trichlorobenzene	502.2; 524.2	0.0005
1,1,2- Trichloroethane	502.2; 524.2	0.0005
Synthetic Organic Contaminants including Pesticides and Herbicides [40 CFR141.24 (h)(18)]		
Alachlor	505[7]; 507; 525.2; 508.1	0.0002
Aldicarb	531.1; 6610	0.0005
Aldicarb sulfoxide	531.1; 6610	0.0005
Aldicarb sulfone	531.1; 6610	0.0008
Atrazine	505[7]; 507; 525.2; 508.1	0.0001
Benzo(a)pyrene	525.2; 550; 550.1	0.00002
Carbofuran	531.1; 6610	0.0009
Chlordane	505; 508; 525.2; 508.1	0.0002
Dalapon	552.1; 515.1	0.001
1,2-Dibromo-3-chloropropane (DBCP)	504.1; 551	0.00002
Di(2-ethylhexyl) adipate	506; 525.2	0.0006
Di(2-ethylhexyl) phthalate	506; 525.2	0.0006
Dinoseb	515.2; 555; 515.1	0.0002
Diquat	549.1	0.0004
2,4-D	515.2; 555; 515.1	0.0001
Endothall	548.1	0.009
Endrin	505; 508; 525.2; 508.1	0.00001
Ethylene dibromide	504.1; 551	0.00001
Glyphosate	547; 6651	0.006
Heptachlor	505; 508; 525.2; 508.1	0.00004
Heptachlor epoxide	505; 508; 525.2; 508.1	0.00002
Hexachlorobenzene	505; 508; 525.2; 508.1	0.0001
Hexachlorocyclopentadiene	505; 525.2; 508; 508.1	0.0001
Lindane	505; 508; 525.2; 508.1	0.00002
Methoxychlor	505; 508; 525.2; 508.1	0.0001
Oxamyl	531.1; 6610	0.002
Picloram	515.2; 555; 515.1	0.0001
Polychlorinated biphenyls (PCBs)[8] (as decachlorophenyl)	508A	0.0001
Pentachlorophenol	515.2; 525.2; 555; 515.1	0.00004
Simazine	505[7]; 507; 525.2; 508.1	0.00007
Toxaphene	505; 508; 525.2	0.001
2,3,7,8-TCDD (Dioxin)	1613	0.000000005
2,4,5-TP (Silvex)	515.2; 555; 515.1	0.0002
Radioactive Contaminants [40 CFR141.25]		
Tritium	Liquid Scintillation	1,000 pCi/l
Stontium-90	Radio-chemical	10 pCi/l
Strontium-89	Radio-chemical	2 pCi/l
Iodine-131	Radio-chemical	1 pCi/l
Cesium-134	Radio-chemical; gamma ray spectrometry	10 pCi/l
Gross beta	Evaporation	4 pCi/l
Other radionuclides		1/10 of the applicable limit

APPENDIX C–INTERPRETING MONITORING DATA

☼ 1 sampling site/1 sampling date:

March 1998–.003

Report in Table: highest detected level=.003. Report no range.

☼ multiple sampling sites/1 sampling date:

Barium	Feb 1998
well 1	0.60
well 2	0.46
well 3	n/d

Report in Table: highest level= 0.60 AND range: n/d-0.60.

☼ 1 sampling site/multiple sampling dates:

Atrazine	1st quarter 1998	2nd quarter 1998	3rd quarter 1998	4th quarter 1998
well 1	0.8	3.8	2.1	0.9

Report in Table: average=1.9 AND range: 0.8-3.8

☼ multiple sampling sites/multiple sampling dates:

total trihalomethanes	2nd quarter 1997	3rd quarter 1997	4th quarter 1997	1st quarter 1998	2nd quarter 1998	3rd quarter 1998	4th quarter 1998
site #1	-	-	-	45	60	125	70
site #2	-	-	-	40	55	115	60
site #3	-	-	-	45	60	105	70
site #4	-	-	-	50	65	135	80
quarterly average	55	125	65	45	60	120	70
rolling annual average	-	-	-	73	74	73	74

Report in Table: highest annual average: 74 AND range 40-135.

Notes: -- The last 3 quarters of the 1997 are shown because you need them to compute the rolling annual average. The range would include only detection data from 1998, unless one of the values from the previous year was so extraordinary that consumers would need it to understand the reported annual average.

-- If your rolling annual average exceeds 80 (the revised MCL effective in 2001), your report must include the health effects language for TTHMs, even though your system was not technically in violation yet.

☼ Lead:

	site 1	site 2	site 3	site 4	site 5	site 6	site 7	site 8	site 9	site 10
July 1998	n/d	n/d	8	12	19	3	n/d	n/d	4	22

Report in Table: 90th percentile=19 AND # of sites above action level (15)=2

Notes: – If your system takes 20 or more samples and more than 5 % (and up to and including 10%) of the samples are above the action level, you must include the educational language provided on page 10.

– Parametric data that you collect in association with this rule should not be included in the report.

☼ Turbidity:

When reporting turbidity as an indicator of filtration performance, systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology. In this situation, you may want to report the data in 2 rows of your table as follows:

	MCL	MCLG	level found	range	sample date	violation	typical source
Turbidity	TT=5 NTU	0	1 NTU	n/a			soil runoff
	TT= percentage of samples<0.5 NTU		96 %	n/a			

APPENDIX D–CERTIFICATION FORM (suggested format)

CWS name: _____
PWS I.D. no: _____

The community water system named above hereby confirms that its consumer confidence report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency.

Certified by: Name _____
Title _____
Phone #_____ Date_____

*** You are not required by EPA rules to report the following information, but you may want to provide it to your state. Check all items that apply.***

_____CCR was distributed by mail or other direct delivery. Specify other direct delivery methods:_____
_____
_____

_____"Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the primacy agency:

_____posting the CCR on the Internet at www._____

_____mailing the CCR to postal patrons within the service area. (attach zip codes used)

_____advertising availability of the CCR in news media (attach copy of announcement)
publication of CCR in local newspaper (attach copy)

_____posting the CCR in public places (attach a list of locations)

_____delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers

_____delivery to community organizations (attach a list)

_____(for systems serving at least 100,000 persons) Posted CCR on a publicly-accessible Internet site at the address: www._____.

_____Delivered CCR to other agencies as required by the primacy agency (attach a list)

APPENDIX E–EXAMPLES OF CONSUMER CONFIDENCE REPORTS

EPA is providing the following consumer confidence reports as examples of report format. In providing these reports, EPA is not endorsing the views nor judging the accuracy of the information contained in the reports. These examples do not necessarily meet all current federal and state CCR requirements. Be sure to check with your state drinking water program since your state may have different requirements from those under which these reports were created.

The first report is a hypothetical example created by EPA.

The second report is provided courtesy of SERCO Labs, St Paul, MN.

The third report is provided courtesy of Des Moines Water Works, Des Moines, IA.

Sampletown Water Quality Report - 1999

Last year, we conducted more than 500 tests for over 80 drinking water contaminants. We only detected 7 contaminants, and found only atrazine at a level higher than the state allows. As we told you in a letter at the time, our water was temporarily unsafe. For more information, see the paragraph on the back marked **Violation**. This brochure is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. For more information about your water, call 867-5309 and ask for Joe Sampson.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Your water comes from three municipal wells sunk about 500 feet into an underground source of water called the Low Plain Aquifer. These wells are located west of town behind the municipal garage. The town owns the land around these wells and restricts any activity that could contaminate them. After the water comes out of the wells, we treat it to remove several contaminants and we also add disinfectant to protect you against microbial contaminants. The state is performing an assessment of our source water that it complete by January 2001. We will report the results to you and tell you how to get a copy of the report when it is available.

Our Water Board meets on the first Tuesday of each month at 7:30 pm in the Town Hall. Please feel free to participate in these meetings.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radio-active material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before we treat it include:

★*Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

★*Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

★*Pesticides and herbicides*, which may come from a variety of sources such as agriculture and residential uses.

★*Radioactive contaminants*, which are naturally occurring.

★*Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

W A T E R Q U A L I T Y D A T A

The table below lists all the drinking water contaminants that we detected during the 1998 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1-December 31, 1998. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Terms & abbreviations used below:

- **Maximum Contaminant Level Goal** (MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level** (MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Action Level** (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **n/a**: not applicable • **nd**: not detectable at testing limit • **ppb**: parts per billion or micrograms per liter • **ppm**: parts per million or milligrams per liter • **pCi/l**: picocuries per liter (a measure of radiation)

Inorganic Contaminants	MCL	MCLG	Sampletown water	Range of detections	Sample Date	Violation	Typical Source of Contaminant
Fluoride (ppm)	2*	4	0.98	-			water additive which promotes strong teeth
Nitrate as nitrogen (ppm)	10	10	6	nd-9			runoff from fertilizer use
Organic Chemical Contaminants							
Atrazine (ppb)	3	3	3.275	.1-10		★YES★	runoff from herbicide used on row crops
Total Trihalomethanes (TTHMs) (ppb)	100	n/a	73	40-135			by-product of drinking water chlorination
Radionuclides							
Beta/photon emitters (pCi/L)	50 **	0	10				erosion of natural deposits
Lead	**AL**	**MCLG**	**Sampletown water**	**# of sites found above the AL**			
Lead (ppb)	15	0	0.205	1 site above AL out of 20 sites sampled			corrosion of household plumbing systems
Unregulated Contaminants							
Chloromethane (ppb)	not regulated		0.07		May 1995		EPA regulations require us to monitor this contaminant while EPA considers setting a limit on it.

* EPA's MCL for fluoride is 4 ppm. However, our state has set a lower MCL to better protect human health.
** The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

About our Atrazine violation: During March, April and May, a big surge in the use of atrazine-based herbicides by area farmers caused our water to exceed the MCL for atrazine. We sent a notice warning you of this problem when it occurred. We are working with the state and local farmers to ensure that this never happens again, and we are monitoring atrazine levels monthly. We regret exposing you to any potential risk. You should know that some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties. If you want more information about barium or the violation, please call us (867-5309), Sample County's health department (423-4444), or the state drinking water office (853-323-3333).

About Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Is our water system meeting other rules that govern our operations? The state and EPA require us to test our water on a regular basis to ensure its safety. In February and May of this year, we took the samples at the required time but failed to submit the results of this monitoring to the state in a timely manner. We are reviewing our procedures to ensure that this paperwork will be submitted in a timely manner in the future.