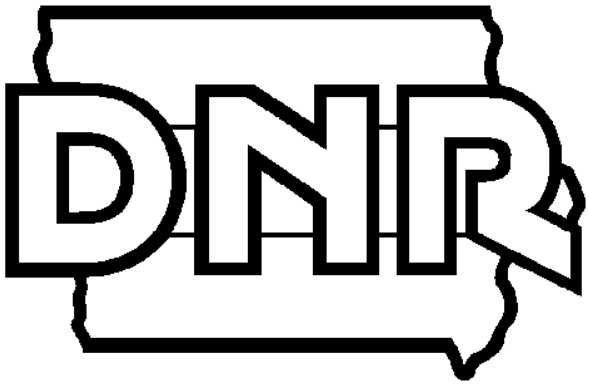
State of Iowa
Public Drinking Water Program
1996 Annual Compliance Report



Environmental Protection Division
Drinking Water Supply Section

December, 1997

Iowa Department of Natural Resources
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State of Iowa Public Drinking Water Program
1996 Annual Compliance Report

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The Iowa Department of Natural Resources (IDNR) - Environmental Protection Division administers the Public Drinking Water Program in Iowa under delegation of authority from the United States Environmental Protection Agency (EPA). The mission of IDNR's Public Drinking Water Program is to protect and enhance public health and safety, and the quality of life for all persons by ensuring the public drinking water is safe to drink. We accomplish this mission by ensuring drinking water quality is monitored on a routine basis, and that public water supplies (PWSs) are designed, operated, and maintained to minimize the possibility of contamination. This report reflects the calendar year of 1996.

- 92.6% of Iowa's active public water supply systems complied with the drinking water quality standards (Maximum Contaminant Levels (MCLs)).

- Of the 83 regulated contaminants, only 7 were found at levels that exceeded the MCL: arsenic, benzene, coliform bacteria, fluoride, nitrate, nitrite, and trihalomethanes.

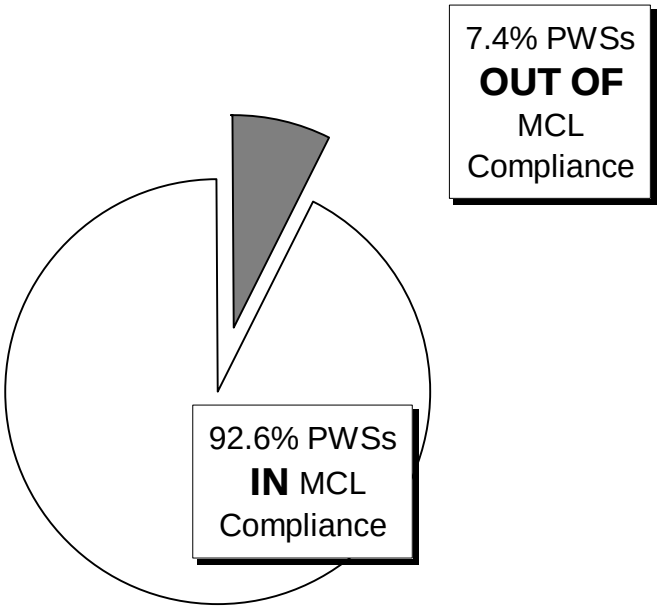
- 96.8% of Iowa's active public water supply systems complied with monitoring requirements.

- No waterborne disease outbreaks or deaths were reported as being attributed to drinking water from regulated public water supply systems.

- IDNR assured compliance with MCLs and monitoring requirements, issued construction and operation permits, completed public water supply inspections, and responded to complaints.

This 1996 Annual Compliance Report is the first issued by IDNR.

Percentage of 1996 Maximum Contaminant Level (MCL) Compliance



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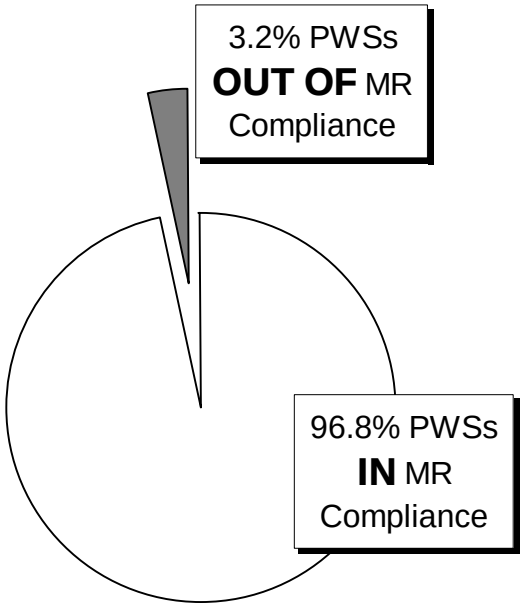
Percentage of 1996 Monitoring and Reporting (MR) Compliance



I. Purpose of this Report

Amendments to Title XIV of the Public Health Service Act, commonly known as the "Safe Drinking Water Act", signed into law on August 6, 1996, require that:

> "Not later than January 1, 1998, and annually thereafter, each State that has primary enforcement responsibility under section 1413 shall prepare, make readily available to the public, and submit to the Administrator an annual report on violations of national primary drinking water regulations by public water supply systems in the state, ..."

This Report was written to fulfill this reporting requirement.

II. The Public Drinking Water Program: An Overview

The United States Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under authority of the 1974 Safe Drinking Water Act (SDWA) and subsequent amendments. EPA sets national limits on contaminant levels in public drinking water supplies (PWSs) to ensure our water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). For some contaminants, EPA establishes Treatment Techniques (TTs) or Action Levels (ALs) in lieu of a MCL to control unacceptable levels of contaminants in water. The EPA also regulates how often PWSs monitor their water supply system for contaminants and report monitoring results to the agency administering the PWSS Program in the State or Territory. Generally, the larger the population served by a PWS, the more frequent the monitoring and reporting (MR) requirements. In addition, the Act requires PWSs to monitor for unregulated contaminants to provide data for future rule development. Finally, PWSs are required to notify the public they serve when violations of regulations occur. The 1996 SDWA Amendments require that public notification include a clear and understandable explanation of the nature of the violation, potential adverse health effects resulting from the violation, steps the PWS is taking to correct the violation, and the availability and necessity of using alternative water supplies until the violation is corrected.

The SDWA applies to all 50 States, the District of Columbia, Native American Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

The SDWA allows States and Territories to seek EPA approval to administer the PWSS Program within their state or territory. The authority to run a PWSS Program is called primacy. To receive primacy, States must meet certain requirements set forth in the SDWA regulations, including adoption of drinking water regulations at least as stringent as Federal regulations and demonstration that the state or territory can enforce program requirements. Of the 57 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within those two jurisdictions.

The 1986 SDWA Amendments gave Native American Indian Tribes the right to apply for and receive primacy. To receive primacy, a Tribe must meet the same requirements as a state. To date, no Native American Indian Tribe has been granted primacy. Currently, EPA administers the PWSS Program on all tribal lands. The two PWSs operated by Native American Indian Tribes in Iowa have not received primacy, and are monitored directly by EPA. These PWSs include:

- Winn-A-Vegas Casino in Sloan, Iowa, located in Woodbury County
- Sac & Fox Community in Tama, Iowa, located in Tama County

Primacy states report quarterly to EPA on their PWS inventory statistics; incidence of MCL, TT, and MR violations; and enforcement actions taken to address violations. The annual compliance report that states are presently required to submit to EPA illustrates the numbers of violations for the four different violation categories: MCL Violations, Treatment Technique Violations, Variances and Exemptions, and Monitoring and Reporting Violations. EPA regional offices also report to the states any enforcement actions taken by EPA within their jurisdiction. All SDWA data for a state is stored in an automated database called the Safe Drinking Water Information System (SDWIS). This database currently contains an inventory of PWSs and violations data, but not individual analytical results.

This Annual Report is based largely on data retrieved from the Iowa version of the Federal Safe Drinking Water Information System

(SDWIS/FED), which in Iowa is called the Water System Facility List (WSFL). The quality of the Iowa data from the SDWIS/FED database is suspect since it is not validated and verified for accuracy, and does not match all of the Iowa WSFL database. The Iowa WSFL database contains actual analytical data. Resource limitations prevented assurance that the SDWIS/FED data was correct; therefore, Iowa has utilized the Iowa WSFL data for this report, which is considered more accurate.

III. Reporting Period

The reporting period is January 1 through December 31 of each calendar year beginning with calendar year 1996. The first report is due January 1, 1998, and covers calendar year 1996. The second report is due July 1, 1998, and will cover calendar year 1997. The third report is due July 1, 1999, and will cover calendar year 1998. Subsequent reports will continue to be due July 1st of each year and will cover the preceding calendar year.

IV. Scope

This report includes violations with respect to:

A. Maximum Contaminant Levels (MCL)
B. Treatment Technique Requirements (TT)
C. Variances and Exemptions
D. Monitoring and Reporting Requirements (MR) - violations which are determined to be significant by the EPA Administrator after consultation with the States (Significant Non-Compliers, or SNCs).

V. Definitions per Chapter 567---40-41 (455B) of the Iowa Administrative Code (IAC)

567---40.2(455B) Definitions

"Public water supply system" (also referred to as a system or a water system) means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes (1) any collection, treatment, storage, and distribution facilities under

control of the supplier of water and used primarily in connection with such system, and (2) any collection (including wells) or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water supply system is either a "community water system" or a "noncommunity water system."

1. "Community water system" means a public water supply system which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.
2. "Noncommunity water system" means a public water supply system that is not a community water system.
   a) "Nontransient noncommunity water system" or "NTNCWS" means a public water system other than a community water system which regularly serves at least 25 of the same persons four hours or more per day, for four or more days per week, for 26 or more weeks per year. Examples of NTNCWSs are schools, day-care centers, factories, offices, and other public water systems which provide water to a fixed population of 25 or more people. In addition, other service areas, such as hotels, resorts, hospitals, and restaurants, are considered as NTNCWSs if they employ 25 or more people and are open for 26 or more weeks of the year.

   b) "Transient noncommunity water system" or "TNCWS" means a public water system other than a non-transient noncommunity or community water system which regularly serves at least 25 individuals daily at least 60 days out of the year. Examples of TNCWSs are convenience stores, bars, restaurants with fewer than 25 employees, golf courses, camps, parks, and recreation areas.

3. "Private water supply system" is a system that does not meet the above definition of a public water system.

(Please note that the following text is a generalized explanation of the SDWA as detailed in the IAC.)

A. Maximum Contaminant Levels (MCLs)

1. Coliform Bacteria, fecal coliforms and *E. coli* ---

567---41.2(1) (455B)

a)Definitions

(1) Non-Acute MCL - The MCL is determined by the presence or absence of total coliforms in a sample. Any coliform-positive routine or repeat/check sample that also is negative for fecal coliforms or *E.coli* constitutes a non-acute MCL based on the following criteria:

(a) If a routine sample is total coliform-positive, the PWS must collect a set of repeat/check samples within 24 hours of being notified of the positive result.

(b) For a PWS which collects 40 samples or more per month, no more than 5.0 percent of the samples collected during a month may be total coliform-positive.

(c) For a PWS which collects less than 40 samples per month, no more than one sample collected during a month may be total coliform-positive.

(2) Acute MCL - Any fecal coliform-positive repeat sample or *E. coli*-positive repeat/check sample, or any total coliform-positive repeat/check sample following a fecal coliform positive or *E. coli*-positive routine sample constitutes a violation of the MCL for total coliforms.

b) If the coliform MCL standard is violated, it indicates a pathway is present for microorganisms that are potentially pathogenic to enter the water system. At greatest risk are children, pregnant women, infants, elderly persons, and persons with compromised immune systems. Disease symptoms may include diarrhea, cramps, nausea, headaches, and fatigue. Chlorination of the drinking water will provide disinfection. Boiling water in the home is also an effective method of sterilizing the drinking water. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

c) A PWS is out of compliance when the MCL is exceeded in any one compliance period assigned either as a monthly or quarterly (by calendar) requirement.

d) A PWS is returned to compliance when repeat/check samples and follow-up sampling yield results which are free of coliform bacteria.

2. Nitrate/Nitrite---567---41.3(455B)

a) The MCL is the maximum allowable concentration of the Nitrate or Nitrite level in a sample, and is measured in milligrams per liter (mg/L). The MCL standards for Nitrate and Nitrite are as follows:

Nitrite	1 mg/L (as Nitrogen)
Nitrate	10 mg/L (as Nitrogen)
Total Nitrate and Nitrite	10 mg/L (as Nitrogen)

b) These inorganic chemicals may result from the natural decay of organic materials such as leaves and crop residue, are used in commercial fertilizers, and also are found in human sewage and wastes from farm animals. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. Nitrate converts to nitrite, which interferes with the oxygen-carrying capacity in the child's blood (methemoglobinemia). This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. Boiling the water will only concentrate nitrates in drinking water, and should not be attempted. Alternative sources of water should be used, such as Food and Drug Administration (FDA) approved bottled drinking water with low levels of nitrate clearly listed on the packaging. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

c)A PWS is out of compliance when the MCL is exceeded in any one compliance period,

assigned either as a monthly, quarterly, or yearly (by calendar) requirement. A violation of the nitrate or nitrite MCL is considered an acute violation with respect to public notification.

d) A PWS is returned to compliance when the average of a confirmation sample result and the original sample are less than the MCL, or the results of successive monthly testing are below the MCL. A PWS must have 6 months of levels at or below the MCL and no violation of MR in order to be returned to compliance.

3. Inorganic Chemicals---567---41.3(455B)

a) Compliance with the MCL is generally determined using the average annual concentration using four quarterly results, is compared to the maximum allowable concentration of the inorganic contaminant in a sample, and is measured in milligrams per liter (mg/L). Communities and nontransient noncommunities were required to sample for the following contaminants in 1996:

Contaminant	***MCL (mg/L)***
Antimony	0.006
Arsenic	0.05
Asbestos	7 million fibers/liter longer than 10 microns
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide (as free Cyanide)	0.2
Fluoride	4.0
Mercury	0.002
Nickel	0.1
Selenium	0.05
Thallium	0.002

b) Inorganic contaminants generally leach into drinking water after dissolving from naturally occurring minerals in the ground, or from leaching and runoff from industry and landfills. If the MCL is exceeded for any of the inorganic contaminants,

it means that a long-term risk to health is possible. These chemicals may damage organs such as the kidneys and liver, damage the nervous system causing loss of feeling and control in the legs, and are sometimes associated with high blood pressure and cancer. High levels of fluoride may cause dental mottling (fluorosis) of the teeth.

c) Generally, a PWS is out of compliance when the running 12-month average exceeds the MCL.

d) A PWS is returned to compliance when the running 12-month average is below the MCL. A PWS must have 6 months of levels at or below the MCL and no violation of MR in order to be returned to compliance.

4. Lead/Copper Action Levels---567---41.4(455B)

a) Definitions of action level exceedance:

(1) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).

(2) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).

b) If the action level at the 90th percentile is exceeded for either lead or copper, it represents a long-term risk to health.

(1) Lead is a common metal found in lead-based paint, household dust, and certain types of pottery, porcelain, and pewter. It can be found in drinking water due to leaching from lead pipes, from lead solder on indoor plumbing, or from brass faucets and fixtures. Lead builds up in the body over many years and can cause damage to red blood cells and kidneys, as well as damage to the brain, which causes mental retardation.

(2) Copper is often used to plumb residential and commercial structures that are connected

to water distribution systems, and leaching of copper from these sources can result in contamination of the drinking water. Copper, at high doses, can cause stomach and intestinal distress, liver and kidney damage, and anemia.

(3) Drinking water that meets the standard for both lead or copper is associated with little risk to health and is considered safe with respect to these contaminants.

c) A PWS is out of compliance when the action level is exceeded in any one compliance period, assigned either as a 6 month (by calendar), yearly, or once per three year requirement.

(1) Once the action level is exceeded for either lead or copper, the PWS must collect water quality parameters, develop a corrosion control treatment study, and implement steps to control the corrosion in the water, plus collect additional samples to demonstrate return to compliance with the action level standard. Public education is also required which advises the water customers of the problem and how they can protect themselves during a lead action level exceedance.

d) Generally, a PWS is returned to compliance when the sample results for two compliance periods are under the action level.

5. Organic Chemicals---567---41.5(455B)

a) Compliance with the MCL is generally determined using the average annual concentration of four quarterly results, is compared to the maximum allowable concentration of the organic contaminant in a sample, and is measured in milligrams per liter (mg/L).

b) Community water systems and nontransient, noncommunity water systems shall monitor for the following Regulated contaminants:

(1) Volatile Organic Chemicals (VOCs)

Contaminant	***MCL (mg/L)***
1,1,1-Trichloroethane	0.20

1,1,2-Trichloroethane	0.005
1,1-Dichloroethylene	0.007
1,2,4-Trichlorobenzene	0.07
1,2-Dichloroethane	0.005
1,2-Dichloropropane	0.005
Benzene	0.005
Carbon tetrachloride	0.005
cis-1,2-Dichloroethylene	0.07
Dichloromethane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
o-Dichlorobenzene	0.6
para-Dichlorobenzene	0.075
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
trans-1,2-Dichloroethylene	0.1
Trichloroethylene	0.005
Vinyl chloride	0.002
Xylenes (total)	10

(2) Synthetic Organic Chemicals (SOCs)

Contaminant	***MCL (mg/L)***
1,2-Dibromo-3-chloropropane	0.0002
2,3,7,8-TCDD (Dioxin) 003	0.00000
2,4,5-TP (Silvex)	0.05
2,4-D 0.07	

Contaminant	***MCL (mg/L)***
Alachlor	0.002
Atrazine	0.003
Benzo(a)pyrene	0.0002
Carbofuran	0.04
Chlordane	0.002
Dalapon	0.2
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene dibromide	0.00005
Glyphosate	0.7

Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.04
Oxamyl (Vydate)	0.2
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated biphenyls	0.0005
Simazine	0.004
Toxaphene	0.003

(3) Total Trihalomethanes 0.10

Described as the sum of the concentrations of bromodichloromethane, tribromomethane (bromoform), dibromochloromethane, and trichloromethane (chloroform), as measured at the point of maximum residence time in the distribution system.

(4) Unregulated Contaminants

(a) Community water systems and nontransient, noncommunity water systems monitor for the following unregulated contaminants at IDNR's discretion, and particularly if the PWS is found to be vulnerable to contamination of one of the following chemicals.

(b) The EPA Health Advisory (HA) limit for lifetime exposure is defined as the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety. The lifetime HA is used for non-regulated contaminants, and the MCL is used for regulated contaminants. Exceedances of the HA for an unregulated or discretionary contaminant are calculated in the same manner as the MCL for a similar

compound type. If the HA is exceeded for an unregulated or discretionary contaminant, the PWS is required to conduct public notification each quarter in which the exceedance is in effect.

Contaminant	***Health Advisory (HA)(mg/L)***
1,1,1,2-Tetrachloroethane	0.07
1,1,2,2-Tetrachloroethane	*(no HA)
1,1-Dichloroethane	*(no HA)
1,1-Dichloropropene	*(no HA)
1,2,3-Trichloropropane	0.4
1,3-Dichloropropane	*(no HA)
1,3-Dichloropropene	0.02
2,2-Dichloropropane	*(no HA)
Aldrin	0.002
Bromobenzene	*(no HA)
Bromodichloromethane	0.1
Bromoform	0.1
Bromomethane	0.01
Butachlor	*(no HA)
Carbaryl	0.7
Chlorodibromomethane	0.1
Chloroethane	*(no HA)
Chloroform	0.1
Chloromethane	0.003
Dibromomethane	*(no HA)
Dicamba	0.2

Contaminant	***Health Advisory (HA)(mg/L)***
Dieldrin	0.002
Hydroxycarbofuran	*(no HA)
m-Dichlorobenzene	0.6
Methomyl	0.2
Metolachlor	0.1
Metribuzin	0.2
o-Chlorotoluene	0.1
p-Chlorotoluene	0.1

Propachlor	0.9
Acrylamide	0.05% dosed @ 1ppm
Epichlorohydrin	0.01% dosed @ 20pm

(c) Discretionary Series - Monitoring for the following compounds is required only at the discretion of the IDNR:

1,2,3-Trichlorobenzene
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Bromochloromethane
Chlorobenzene
Dichlorodifluoromethane
Fluorotrichloromethane
Hexachlorobutadiene
Isopropylbenzene
n-Butylbenzene
n-Propylbenzene
Naphthalene
p-Isopropyltoluene
sec-Butylbenzene
tert-Butylbenzene

c) If the MCL is exceeded for any of the organic contaminants, the exceedance represents a possible long-term risk to health. Organic contaminants come from petroleum solvents, paint removers, degreasers, cleaning fluids, pesticides, gasoline, electrical transformers, manufacturing processes, chemical production, and the production of plastics. Agricultural runoff, improper waste disposal, and improper handling and storage techniques contribute to drinking water contamination, via percolation of the contaminant through the soil into the groundwater. Cancer, as well as damage to the heart and liver, the nervous system, or the immune system may occur through long term exposure to these organic contaminants. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

d) Generally, a PWS is out of compliance when the

running 12-month average exceeds the MCL.

e) A PWS is returned to compliance when the running 12-month average is below the MCL. A PWS must have 6 months of levels at or below the MCL and no violation of MR in order to be returned to compliance.

6. Turbidity Requirements---567---41.7 (455B)

a)The MCLs (treatment technique requirements) for turbidity are applicable to community and noncommunity PWSs using surface water or groundwater under the direct influence of surface water in whole or in part.

For PWSs using conventional or direct filtration, the turbidity level of representative samples of a PWSs filtered water must be less than or equal to 0.5 nephelometric turbidity units (NTU) in at least 95% of the measurements taken each month, with no single sample result exceeding 5 NTUs.

b) If a violation occurs of the turbidity standard, it indicates that there are particles suspended in the water that can interfere with disinfection and tests for bacteria. It can also prevent maintenance of an effective disinfectant residual throughout the distribution system. Excessive turbidity can allow disease-causing organisms such as viruses, or protozoans such as *Giardia lamblia* or *Cryptosporidium* to enter the distribution system by masking their presence. Violation of the turbidity standard is a treatment technique violation.

c) A PWS is out of compliance when the MCL is exceeded in any one month.

d) A PWS is returned to compliance when turbidity results are consistently below the MCL standards, and it may take several months to a year for a PWS to be returned to compliance.

7. Residual Disinfectant Requirements---567--41.7(455B)

a) All PWSs using a surface water source or a groundwater source under the direct influence of surface water must provide disinfection. The

chlorine residual in drinking water is a measure of the amount of available chlorine remaining in the water once it enters the PWSs distribution system. It also allows the maintenance of an effective disinfectant agent throughout the PWSs distribution system. Insufficient chlorine or disinfectant residual levels can allow disease-causing organisms to survive and thereby be distributed throughout the system.

(1) The residual disinfectant entering the distribution system cannot be lower than 0.3 mg/L free residual chlorine for more than 4 hours, but must be continuously maintained.

(2) The residual disinfectant within the distribution system cannot be undetectable in more than 5% of the samples each month for any 2 consecutive months.

b) All PWSs using a surface water source or a groundwater source under the direct influence of surface water must determine their contact time (CT) on a daily basis.

(1) The CT in drinking water is determined by multiplying the disinfectant concentration by the amount of time that the disinfectant is in contact with the water. Each system must achieve a specific CT depending on water quality parameters, which include the pH and temperature of the water.

(2) Insufficient CT can allow disease-causing organisms such as *Giardia lamblia* or viruses to survive and thereby be distributed throughout the system.

c) A PWS is out of compliance with the TT standard when the CT ratio requirement is insufficient.

d) A PWS is returned to compliance with the TT standard when the ratio is sufficient.

e) If a PWS continues to experience TT violations, that PWS could be required to make modifications to the treatment process to achieve compliance.

8. Radionuclides---567---41.8 (455B)

a) Compliance with the MCL is determined using the average annual concentration of at least four quarterly results, is compared to the maximum

allowable concentration of the contaminant in a sample, and is measured in either picocuries per liter (pCi/L) or as a dose in millirems per year (mrem/yr.).

Contaminant	***Units***
Combined Radium -226 and Radium -228	5 pCi/
Gross Alpha Particle Activity (includes Radium -226 but excludes Radon and Uranium)	pCi/L
Gross Beta Particle and Photon Activity	4 mrem/

b) Radionuclides occur naturally in certain groundwaters in the state. If the MCL is exceeded for any of the radionuclide contaminants, it represents a possible long-term risk to health from cancer. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

c) A PWS is out of compliance when the annual average exceeds the MCL, assigned either as a once-per-4-year grab sample (single) or as a composite sample requirement (quarterly grab samples combined at the end of one year or four years by the laboratory).

d) A PWS is returned to compliance when the running 12-month average is below the MCL.

9. Public Notification---567---41.10 (455B)

a) The SDWA requires a PWS to notify the state and the water consumers when the following violations occur:

(1) an MCL has been exceeded

(2) a required treatment technique has been violated

(3) a compliance schedule has not been met; or

(4) a monitoring violation has occurred.

(5) To comply with the reporting and notification requirements of a violation, the PWS must do three things:

(a) Notify the IDNR within 48 hours after the violation occurred.

(b) Notify the consumers by the required public notification procedures.

(c) Provide proof of such public notice to the IDNR.

b) If a public notification requirement is not met, the public health is placed at risk because the public is unaware of the potential health effects of the water being consumed. Children, pregnant women, the elderly, and persons with compromised immune systems are placed at the greatest risk.

c) A PWS is in violation of the public notification rule when it does not issue public notification specific to its violation and does not provide proof of same to the IDNR.

d) A PWS is returned to compliance with the public notification rule when it publishes the appropriate public notification language within the required amount of time and provides proof of same to the IDNR. (Resource limitations have prevented the IDNR from assuring compliance with public notification requirements by PWSs.)

10. Public Education Program---567---41.10(3) (455B)

a) The SDWA requires a PWS to notify the IDNR and the population served by the PWS when the action level for lead is exceeded.

(1) At least every twelve months:

(a) Mandatory Language must be provided to the consumers and the general public in the form of:

(i) Newspaper announcement,

(ii) Pamphlets and brochures to doctors, clinics, schools, day care facilities, etc., and,

(iii) Attachments to customer's water bills.

b) A message alerting the public must be printed directly on the water bill.

c) A public service announcement must be issued to television and radio for broadcasting.

(2) At least every six months, a public service announcement must be issued to television and radio for broadcasting.

b) If a public education requirement is not met, the public health is placed at risk because the public is unaware of the potential health effects of the water being consumed. All children are at risk from long term exposure to lead.

c) A PWS is in violation of the public education requirement when it does not issue public education and does not provide proof of same to the IDNR.

d) A PWS is returned to compliance with the public education requirement when it publishes the appropriate public education materials in the required format at the required cycle of time and provides proof of same to the IDNR. Resource limitations have prevented the IDNR from assuring compliance with public education requirements by PWSs.

B. Treatment Technique (TT) Requirements

For some contaminants EPA established TTs in lieu of MCLs to control unacceptable levels of contaminants. Two rules fall under this definition: Lead/Copper and the Surface Water Treatment Rule (SWTR). If a PWS exceeds the action level of either lead or copper, that exceedance is a treatment technique action level exceedance. If a PWS exceeds the turbidity limit, does not meet the residual disinfectant requirements, or does not meet the contact time (CT) ratio, that PWS has incurred a treatment technique violation.

C. Variances and Exemptions

The IDNR, according to the federal regulations, has the authority to issue variances or exceptions for certain exceedances of ALs, MCLs, or TT requirements. Variances or exceptions are not allowed for exceedances of micro-organism standards, acute concentrations of any contaminant, any violations of the surface water treatment rule, or lead exceedances. Basically, a variance or exception is a means to allow an extended schedule for a PWS to

permanently correct the violation(s). In 1996, the conditions that the IDNR and a PWS were required to meet prior to granting a variance or exception made it impractical to utilize these provisions. Instead of issuing variance or exceptions, the IDNR used its authority to extend schedules for returning to compliance through the water supply operation permit program.

Iowa did not have rules on variances and exemptions for any contaminant during the reporting period of January 1, 1996 through December 31, 1996. Iowa does not issue variances and exemptions for violations of MCLs, TTs, ALs, or MRs.

D. Monitoring & Reporting (MR) Requirements

1. Coliform Bacteria

a) PWSs must collect total coliform samples at sites which are representative of water quality throughout the public water supply distribution system according to a written sampling plan.

(1) Community PWSs and noncommunity PWSs serving schools or daycare facilities must base the number of samples on the population served by the PWS. The minimum number of samples collected per month is determined by population groups as listed in Chapter 41.2(1)c(1)3 (455B) of the IAC.

(2) Regional PWSs, such as rural water districts, sample at a frequency based on miles of pipe in the distribution system, which is deemed equivalent to basis on population.

(3) Transient noncommunity PWSs, such as parks and rest areas, must monitor each calendar quarter at a minimum, or if the population served is over 1000 persons, monitor at the same frequency as a like-sized community PWS. EPA makes provisions for reducing the monitoring to annual, but in Iowa this is not considered sufficient protection for public health.

(4) If a routine sample is total coliform positive, the PWS must collect repeat samples. That PWS

permanently correct the violation(s). In 1996, the conditions that the IDNR and a PWS were required to meet prior to granting a variance or exception made it impractical to utilize these provisions. Instead of issuing variance or exceptions, the IDNR used its authority to extend schedules for returning to compliance through the water supply operation permit program.

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(4) If a routine sample is total coliform positive, the PWS must collect repeat samples. That PWS

must also collect a minimum of five routine samples during the next month the PWS is in operation.

(5) If any routine or repeat samples are total coliform positive, the PWS must analyze that same sample to determine if fecal coliforms or *E.coli* are present.

b) A PWS is out of compliance when the PWS fails to collect and have analyzed the required number of samples in any one compliance period.

c) A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database.

(1) If a PWS fails to monitor for any routine, repeat, or follow-up samples, that PWS has incurred a monitoring violation which is identified by EPA as being a MAJOR monitoring violation.

(2) If a PWS fails to monitor for only a portion of the required routine, repeat, or follow-up samples, that PWS has incurred a monitoring violation which is identified by EPA as being a MINOR monitoring violation.

(3) The significance of MAJOR and MINOR relates to whether a violation places the PWS on the EPA Significant Non-Complier list (SNC). Four or more MAJOR monitoring violations in a 12-month period automatically places the PWS on the SNC list.

2. Nitrate/Nitrite

a) All PWSs, including community, noncommunity, and transient noncommunity PWSs, must monitor to determine compliance with the MCL for nitrate and nitrite.

(1) Frequency:

(a) All PWSs must monitor for nitrate at least on an annual basis and for nitrite at least once.

(b) If a PWS exceeds one-half the MCL for either nitrate or nitrite, it must monitor on a quarterly basis.

(c) If a PWS exceeds the MCL for either nitrate or nitrite, it must monitor for that contaminant on a monthly basis.

(2) If a PWS fails to monitor for nitrate for two consecutive monthly or quarterly compliance periods, it automatically meets the definition of an EPA SNC. If a PWS fails to monitor a yearly requirement for nitrate it automatically meets the definition of an EPA SNC.

b) A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

c) A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database (WSFL).

3. Inorganic Chemicals

a) Community and nontransient noncommunity PWSs must monitor to determine compliance with the MCL for inorganic contaminants.

(1) The IDNR issues a sampling schedule through an operation permit which may vary from quarterly to once every nine years, with the frequency determined by past analytical results.

(2) If a PWS fails to monitor for inorganics for two consecutive quarterly compliance periods, it automatically meets the definition of an EPA SNC. If a PWS fails to meet a yearly or less frequent monitoring requirement for inorganics, it automatically meets the definition of an EPA SNC.

b) A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

c) A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database.

4. Lead/Copper

a) All community and nontransient noncommunity PWSs must monitor to determine compliance with the Action Level for lead and copper at sites according to a written sampling plan which targets sites that have specific home plumbing materials with lead and copper. The number of

samples collected is based on the population served.

(1) All affected PWSs must collect initial lead and copper tap monitoring. Water quality parameters and source water sampling are collected where the action level for either lead or copper is exceeded. Follow-up monitoring is continued on a routine schedule regardless of analytical results.

(2) If a PWS fails to monitor for lead or copper, it automatically meets the definition of an EPA SNC.

b) A PWS is out of compliance when the PWS fails to collect the required number or type of samples in any one compliance period, either six-month or annual.

c) A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database.

5. Organic Chemicals

a) Community and nontransient noncommunity PWSs must monitor to determine compliance with the MCL for organic contaminants.

(1) The IDNR issues a sampling schedule through an operation permit which may vary from quarterly to once every five years, the schedule being based on past analytical results.

(2) If a PWS fails to monitor for organics for two consecutive quarterly compliance periods it automatically meets the definition of an EPA SNC. If a PWS fails to monitor a three- or five-year requirement for organics it automatically meets the definition of an EPA SNC.

b) A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

c) A PWS is returned to compliance when the sample is collected and the results are in the IDNR's electronic database.

6. Turbidity, Residual Disinfectant, and CT Ratio

a) Turbidity sampling requirements are applicable to community and noncommunity PWSs using surface water or groundwater under the direct influence of surface water in whole or in part.
   (1) The number of samples is based on the population served, and must be collected either every four hours or continuously.
   (2) If a PWS fails to monitor for turbidity, that PWS has incurred a monitoring violation and must issue public notification.

b) Residual disinfectant sampling requirements are applicable to community and noncommunity PWSs using surface water or groundwater under the direct influence of surface water in whole or in part.
   (1) When a coliform bacterial sample is collected, that sample must be analyzed for residual disinfectant immediately.
   (2) The residual disinfectant must be measured at a minimum of every four hours at the entry point to the distribution system. Depending upon the size of the system, the requirement may be continuous monitoring.
   (3) If a PWS fails to monitor for residual disinfectant, that PWS has incurred a monitoring violation and must issue public notification.

c) A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

d) A PWS is returned to compliance when the samples are collected and the results are reported to the IDNR.

7. Radionuclides

a) Community PWSs must monitor to determine compliance with the MCL for radionuclides.
   (1) The IDNR issues a sampling schedule which may vary from a quarterly sample to a composite - (4 quarterly grabs combined at the end of the year) once every four years, depending on past results.
   (2) If a PWS fails to monitor for radionuclides, that

PWS has incurred a monitoring violation and automatically meets the definition of an EPA SNC.

b) A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

c) A PWS is returned to compliance when the sample is collected and the result is in the IDNR's electronic database.

8. Public Notification

a) All PWSs, including community, noncommunity, and transient noncommunity PWSs, must issue public notification for failure to monitor, and for exceeding a MCL or an Action Level, failure to meet a TT, or failure to meet a compliance schedule for remediation for a MCL, AL, or TT violation.

(1) The IDNR issues a Notice of Violation (NOV) which includes the Public Notification instructions and mandatory language example for the public notification.

(2) If a PWS fails to issue public notification, that PWS has incurred a violation.

b) A PWS is out of compliance when the PWS fails to issue any required public notification.

c) A PWS is returned to compliance when the PWS issues the required public notification and submits a copy of same to the IDNR.

9. Public Education Program

a) Note that Public Education is not the same as public notification. Public notification is a portion of public education but the reverse is not true.

b) All community and non-transient noncommunity PWSs must conduct a public education program if they exceed the lead Action Level.

c) A PWS is out of compliance when the PWS fails to issue any portion of the required public education program.

d) A PWS is returned to compliance when the PWS initiates or resumes the required public education and submits a copy of same to the IDNR.

VI. Distribution of this Report

The Act requires both summary and detailed reports from the states to be accessible to the EPA, the Governor of the State, and the public. The State of Iowa has determined that the following options will be utilized to make this report readily available to the public. The State will:

A. Supply the detailed report to the EPA Headquarters in Washington, DC.
B. Supply the detailed report to the EPA Regional Headquarters in Kansas City, KS.
C. Supply the detailed report to the Office of the Governor of Iowa.
D. Publish an official notice of report availability.
E. Include notices of availability on the IDNR internet website.
F. Make the detailed report available for downloading from the IDNR internet website.
G. Supply the detailed report to the public water systems identified in the detailed report.
H. Make the detailed and summary report available for organizations upon request.

VII. Summary Report/Conclusion of Data

A. Explanation

This Summary Report is strictly a numerical summary of all the violations of each contaminant being monitored for SDWA compliance. This report lists the number of violations of each contaminant categorized by both MCL and Monitoring/Reporting Violations.

B. Table A: Summary Report explanation:

1. The first column identifies the contaminant name.
2. The second column identifies the MCL for that contaminant.
3. The third column identifies the number of MCL violations for that contaminant.
4. The fourth column identifies the number of PWSs with MCL violations for that contaminant.
5. The fifth column identifies the number of TT violations.
6. The sixth column identifies the number of PWSs with TT

violations.

7. The seventh column identifies the number of EPA SNC MR violations for that contaminant.
8. The eighth column identifies the number of PWSs with EPA SNC MR violations for that contaminant.
9. ***Please note that the MCL data originated from WSFL-IA.***
10. ***Please note that the Significant Non-Complier monitoring reporting data originated from SDWIS/FED.***

NOTE: This is an EPA formatted table.

State: Iowa

VII. B - Summary Report.

TABLE A

Reporting Interval: January 1, 1996 through December 31, 1996

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
Organic Contaminants	MCL (mg/L)	Number of Violations	Number of Systems with Violations	Number of Violations	Number of Systems with Violations	Number of Violations	Number of Systems with Violations
1,1,1-Trichloroethane	0.2	-0-	-0-			-0-	-0-
1,1,2-Trichloroethane	0.005	-0-	-0-			-0-	-0-
1,1-Dichloroethylene	0.007	-0-	-0-			-0-	-0-
1,2,4-Trichlorobenzene	0.07	-0-	-0-			-0-	-0-
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	-0-	-0-			-0-	-0-
1,2-Dichloroethane	0.005	-0-	-0-			-0-	-0-
1,2-Dichloropropane	0.005	-0-	-0-			-0-	-0-
2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$	-0-	-0-			-0-	-0-
2,4,5-TP	0.05	-0-	-0-			-0-	-0-
2,4-D	0.07	-0-	-0-			-0-	-0-
Acrylamide		-0-	-0-			-0-	-0-
Alachlor	0.002	-0-	-0-			-0-	-0-
Atrazine	0.003	-0-	-0-			-0-	-0-
Benzene	0.005	3	1			-0-	-0-
Benzo[a]pyrene	0.0002	-0-	-0-			-0-	-0-
Carbofuran	0.04	-0-	-0-			-0-	-0-
Carbon tetrachloride	0.005	-0-	-0-			-0-	-0-

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	MCL (mg/L)	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Chlordane	0.002	-0-	-0-			-0-	-0-
cis-1,2-Dichloroethylene	0.07	-0-	-0-			-0-	-0-
Dalapon	0.2	-0-	-0-			-0-	-0-
Di(2-ethylhexyl)adipate	0.4	-0-	-0-			-0-	-0-
Di(2-ethylhexyl)phthalate	0.006	-0-	-0-			-0-	-0-
Dichloromethane	0.005	-0-	-0-			-0-	-0-
Dinoseb	0.007	-0-	-0-			-0-	-0-
Diquat	0.02	-0-	-0-			-0-	-0-
Endothall	0.1	-0-	-0-			-0-	-0-
Endrin	0.002	-0-	-0-			-0-	-0-
Epichlorohydrin		NA	NA			NA	NA
Ethylbenzene	0.7	-0-	-0-			-0-	-0-
Ethylene dibromide	0.00005	-0-	-0-			-0-	-0-
Glyphosate	0.7	-0-	-0-			-0-	-0-
Heptachlor	0.0004	-0-	-0-			-0-	-0-
Heptachlor epoxide	0.0002	-0-	-0-			-0-	-0-
Hexachlorobenzene	0.001	-0-	-0-			-0-	-0-
Hexachlorocyclopentadiene	0.05	-0-	-0-			-0-	-0-
Lindane	0.0002	-0-	-0-			-0-	-0-
Methoxychlor	0.04	-0-	-0-			-0-	-0-

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	MCL (mg/L)	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Monochlorobenzene	0.1	-0-	-0-			-0-	-0-
o-Dichlorobenzene	0.6	-0-	-0-			-0-	-0-
Oxamyl (Vydate)	0.2	-0-	-0-			-0-	-0-
para-Dichlorobenzene	0.075	-0-	-0-			-0-	-0-
Pentachlorophenol	0.001	-0-	-0-			-0-	-0-
Picloram	0.5	-0-	-0-			-0-	-0-
Simazine	0.004	-0-	-0-			-0-	-0-
Styrene	0.1	-0-	-0-			-0-	-0-
Tetrachloroethylene	0.005	-0-	-0-			-0-	-0-
Toluene	1	-0-	-0-			-0-	-0-
Total polychlorinated biphenyls	0.0005	-0-	-0-			-0-	-0-
Toxaphene	0.003	-0-	-0-			-0-	-0-
trans-1,2-Dichloroethylene	0.1	-0-	-0-			-0-	-0-
Trichloroethylene	0.005	-0-	-0-			-0-	-0-
Vinyl chloride	0.002	-0-	-0-			-0-	-0-
Xylenes (total)	10	-0-	-0-			-0-	-0-
Total trihalomethanes	0.10	3	2			-0-	-0-

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	MCL (mg/L)	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Inorganic Contaminants							
Antimony	0.006	-0-	-0-			-0-	-0-
Arsenic	0.05	1	1			1	1
Asbestos	7 million fibers/ 10 μm long	-0-	-0-			-0-	-0-
Barium	2	-0-	-0-			-0-	-0-
Beryllium	0.004	-0-	-0-			-0-	-0-
Cadmium	0.005	-0-	-0-			-0-	-0-
Chromium	0.1	-0-	-0-			-0-	-0-
Cyanide (as free cyanide)	0.2	-0-	-0-			-0-	-0-
Fluoride	4.0	7	3			-0-	-0-
Mercury	0.002	-0-	-0-			-0-	-0-
Nitrate	10 (as Nitrogen)	52	5			45	35
Nitrite	1 (as Nitrogen)	2	2			4	4
Selenium	0.05	-0-	-0-			-0-	-0-
Thallium	0.002	-0-	-0-			-0-	-0-
Total nitrate and nitrite	10 (as Nitrogen)	-0-	-0-			-0-	-0-

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Radionuclide MCLs							
Gross alpha	15 pCi/L/	-0-	-0-			1	1
Radium-226 and radium-228	5 pCi/L/	-0-	-0-			-0-	-0-
Gross beta	4 mrem/yr.	-0-	-0-			-0-	-0-
Subtotal		68	13			54	41

		MCL		Treatment Techniques		Significant Monitoring/Reporting	
	MCL (mg/L)	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Total Coliform Rule							
Acute MCL violation	Presence	25	24				
Non-acute MCL violation	Presence	126	102				
Major routine and follow up monitoring						106	43
Sanitary survey[1]						State initiates Sanitary Survey	State initiates Sanitary Survey
Subtotal		151	126			106	43

		MCLs		Treatment Techniques		Significant Monitoring/Reporting	
	MCL (mg/L)	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Surface Water Treatment Rule							
Filtered systems		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Monitoring, routine/repeat		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Treatment techniques		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Unfiltered systems		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Monitoring, routine/repeat		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Failure to filter		Not tracked	Not tracked	Not tracked	Not tracked	Not tracked	Not tracked
Subtotal		-0-	-0-	-0-	-0-	-0-	-0-

** Iowa has NO surface water systems which do not filter.*

		Action Level Exceedance		Treatment Techniques		Significant Monitoring/Reporting	
	Action Level	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Lead and Copper Rule	0.015mg/l @ Lead 1.3 mg/l @ Copper	29 Lead 16 Copper	29 Lead 16 Copper	29 Lead 16 Copper	29 Lead 16 Copper	-0-	-0-
Initial lead and copper tap M/R						2	2
Follow-up or routine lead and copper tap M/R						10	10
Treatment installation	NA					-0-	-0-
Public education	NA					-0-	-0-
Subtotal		29 Lead 16 Copper	29 Lead 16 Copper	29 Lead 16 Copper	29 Lead 16 Copper	12	12

VIII. Statistical Summary

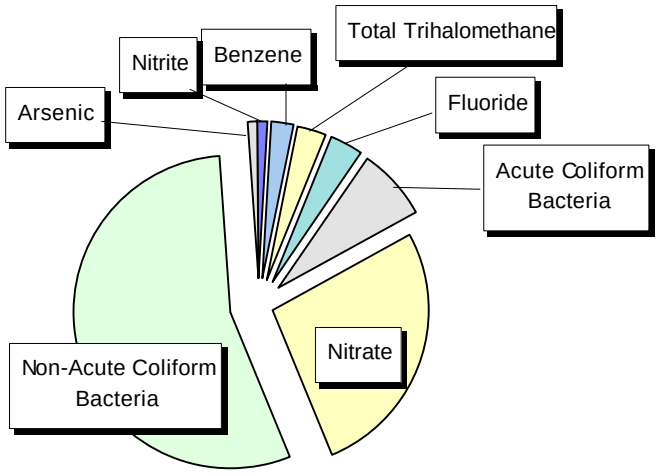
A. MCL (MCL) Violations are itemized in Table B, which follows this section.

For this reporting period there were a total of 219 MCL violations incurred by 145 PWSs. There were 1939 active PWSs in the State of Iowa in 1996. A total of 7.4% of Iowa's PWSs were in violation of an MCL for at least one contaminant.

1. The MCL and MR violation data are summarized in various charts in this section.

Number of MCL violations and number of PWSs with violations:

CHART #1: MCL VIOLATIONS BY CONTAMINANT



Contaminant	Number of Violations	Number of PWSs with Violations	%Violations #Violations of Total
Arsenic	1	1	0.5
Nitrite	2	2	0.9
Benzene	3	1	1.4
Total Trihalomethanes	3	2	1.4
Fluoride	7	3	3.2
Coliform Bacteria - Acute MCL	25	24	11.4
Nitrate	52	5	23.7
Coliform Bacteria -Non-Acute MCL	126	102	57.5

Total	**219**	**140**	**100**

2. The number and types of Enforcement Actions for the 219 MCL violations in 1996 are listed in Chart 2:

CHART #2

Type of Enforcement Actions	Number of Enforcement Actions
AO without Penalty	4
Public Notice Received	4
AO with Penalty	6
BCA Signed	28
Compliance Achieved	177

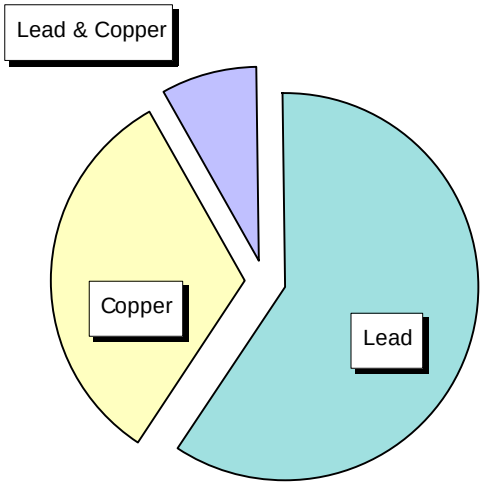
3. The total number of samples collected compared to the number of violations by contaminant are shown in Chart 3:

CHART #3

Contaminant	Number of MCL Violations	Total Number of Samples Collected
Arsenic	1	217
Benzene	3	486
Trihalomethanes (Total)	3	421
Nitrite	2	489
Fluoride	7	361
Nitrate	52	3282
Coliform Bacteria	151	50141
Total	**219**	**55397**

4. Action Level Exceedances are listed in Chart 4:

CHART #4: LEAD &/OR COPPER ACTION LEVEL EXCEEDANCES



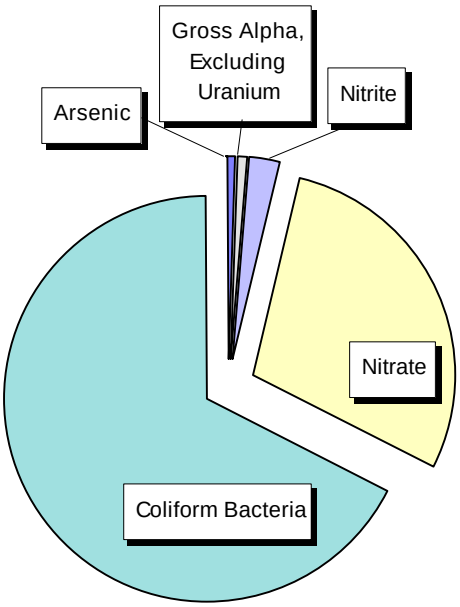
Contaminant	Number of AL Exceedances	Number of PWS with Exceedances
Copper	16	16
Lead	29	29
Copper & Lead	4	4

*One PWS returned to compliance through testing under the copper action level. One PWS returned to compliance through testing under the lead action level.

B. Monitoring and Reporting (MR) Violations that are significant (SNCs), as determined by the EPA Administrator in consultation with the States, are listed in Table C, which follows this section.

1. For this reporting period there were 156 MRs incurred by 62 PWSs which met the criteria of an SNC. There were 1939 active PWSs in the State of Iowa in 1996. A total of 3.2% of Iowa's PWSs were identified as SNCs for failure to monitor.
Chart 5 lists the contaminant MR violations:

CHART #5: MONITORING/REPORTING VIOLATIONS BY CONTAMINANT



Contaminant	Number of Violations	Number of PWSs with Violations	% Violations (# Violations/Total)
Arsenic	1	1	0.6
Gross Alpha, Excluding Uranium	1	1	0.6
Nitrite	4	4	2.6
Nitrate	45	35	28.7
Coliform Bacteria	105	43	67.5
Total	**156**	*****	**100**

*A PWS can have SNC MR violations for more than one contaminant.

3. Enforcement actions on the 156 MR violations in 1996 are shown in Chart 6:

CHART #6:

Types of Enforcement Actions	Number of Enforcement Actions
Public Notice Received	1
AO with Penalty	2
Referred to Attorney General (AG)	6
BCA Signed	9
Formal Notice of Violation (NOV) Issued	11
Compliance Achieved	59
EPA Implicit Return to Compliance (RTC) *	68

* EPA Implicit Return To Compliance (RTC) is a relatively new term used by EPA to denote PWSs which have six months of compliance since the prior violation and therefore by definition have been Returned to Compliance, and the violation is considered to be resolved.

4. Enforcement actions by Violation Type are shown in Chart 7:

CHART #7:

Types of Violation	Number of Violations
Repeat (coliform) MINOR Monitoring Violation	2
Routine (coliform) MINOR Monitoring Violation	8
Repeat (coliform) MAJOR Monitoring Violation	13
Regular Monitoring Violation	51
Routine (coliform) MAJOR Monitoring Violation	82
Total	**156**

5. Monitoring/Reporting Violations for the Lead & Copper program are listed in Chart 8. All PWS returned to compliance through appropriate sample collection.

CHART #8:

Contaminant	Number of Violations	Number of PWS with Violations
Copper	4	4
Lead	4	4

IX. Full Report - Explanation

This Full Report is a detailed listing of all the violations of each SDWA contaminant, along with the name of the PWS which incurred that violation. Violations can be resolved in a number of ways, as discussed below. The Full Report is divided into two sections, each of which specifically lists each Maximum Contaminant Level (MCL) and Monitoring and Reporting (MR) violation incurred, sorted by name of the PWS.

A. The 1996 MCL VIOLATIONS Report specifies all of the MCL violations within the reporting period.

1. Please note that the MCL data originated from Iowa's database, WSFL.

2. Legend

PWS NAME Business name of the Public Water System

4. Enforcement actions by Violation Type are shown in Chart 7:

CHART #7:

Types of Violation	Number of Violations
Repeat (coliform) MINOR Monitoring Violation	2
Routine (coliform) MINOR Monitoring Violation	8
Repeat (coliform) MAJOR Monitoring Violation	13
Regular Monitoring Violation	51
Routine (coliform) MAJOR Monitoring Violation	82
Total	**156**

5. Monitoring/Reporting Violations for the Lead & Copper program are listed in Chart 8. All PWS returned to compliance through appropriate sample collection.

CHART #8:

Contaminant	Number of Violations	Number of PWS with Violations
Copper	4	4
Lead	4	4

IX. Full Report - Explanation

This Full Report is a detailed listing of all the violations of each SDWA contaminant, along with the name of the PWS which incurred that violation. Violations can be resolved in a number of ways, as discussed below. The Full Report is divided into two sections, each of which specifically lists each Maximum Contaminant Level (MCL) and Monitoring and Reporting (MR) violation incurred, sorted by name of the PWS.

A. The 1996 MCL VIOLATIONS Report specifies all of the MCL violations within the reporting period.

1. Please note that the MCL data originated from Iowa's database, WSFL.

2. Legend

PWS NAME Business name of the Public Water System

PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
NAME OF CONTAMINANT	An analyte which is monitored under the SDWA
ID NUMBER	A unique and dedicated number assigned to each violation as it occurs. (IDNR use only)
DATE OF VIOLATION	Date the violation occurred
TYPE OF ENFORCEMENT	Text explanation of actions taken by the PWS and/or the IDNR in response to the violation
DATE OF ACTION	Date the follow-up action or enforcement action occurred

2. MCL Violations - discussion of general policy:
   a) A MCL violation can occur for any regulated contaminant. The monitoring frequency is dependent upon both the type of contaminant and the levels previously found in a particular water supply for that contaminant. The most frequent possible occurrence of a MCL violation is once a month. Once a MCL violation has occurred, a supply must have six consecutive months without a MCL or MR violation forthat contaminant before it is considered to be returned to compliance. The violation is then coded Compliance Achieved.
   b) For multiple repeat MCL violations of a contaminant, the IDNR issues a revised operation permit with conditions that require the PWS to remediate the MCL violation by correcting operation deficiencies, adding treatment, blending water sources, or obtaining an alternative source of drinking water. Alternative sources may include construction of a new well or connection to another PWS. The violation is coded BCA (Bilateral Compliance Agreement) Signed. Once the violation is resolved, it is coded Compliance Achieved.
   c) A BCA is a Water Supply Operation Permit which has an appendix attached that defines remediation of a violation with a schedule for completion of that remediation (corrective

action).

d) For coliform bacteria, if three non-acute MCL violations or one acute MCL violation occur in a 12-month period, the IDNR issues a revised operation permit with conditions that require that PWS to remediate the MCL problem. The violation is coded as a BCA signed, and once the violation is resolved, it is coded as Compliance Achieved.

e) For nitrates/nitrites, if four acute MCL violations occur in a 12-month period, the IDNR issues a revised operation permit with conditions that require that PWS to remediate the MCL problem. The violation is coded as a BCA signed, and once the violation is resolved, it is coded as Compliance Achieved.

f) Depending on the contaminant, in general, an MCL violation may occur several times, even with treatment. Or, the PWS may be unable or unwilling to remediate. When this occurs, the IDNR issues an Administrative Order (AO) which is the next step in legally enforcing the BCA. The violation is coded as AOP (Administrative Order with Penalty). AO's are generally issued with a penalty, but may be issued without a penalty under certain circumstances. AO's issued to a PWS due to MCL violations usually are accompanied by a BCA which outlines the compulsory schedule for remediation.

g) For those PWSs listed in this report that show Compliance Achieved, BCA Signed, AO With Penalty (AOP), AO Without Penalty (AOWP), Referred to Attorney General (AG), or Formal Notice of Violation Issued (NOV), under the TYPE OF FOLLOW-UP ACTION, appropriate enforcement actions have been taken by the State. The other follow-up actions listed indicate the most recent action taken by the PWS. EPA Implicit Return to Compliance (RTC) indicates that no further violations have occurred related to this particular violation for a period of at least six months and the system is automatically deemed to be returned to compliance by EPA.

h) Those PWSs listed in this report that show Public

Notice Requested or Public Notice Received under the TYPE OF FOLLOW-UP ACTION, have not been returned to compliance as of the date of this report.

i) All of these PWSs are being tracked by the IDNR and if and when they meet the criteria, they will be issued a BCA with a schedule for remediation, or where necessary, an AO with penalty with BCA remediation schedule. Or, they will meet the criteria for Compliance Achieved and will be coded accordingly.

3. There were 219 MCL violations for this reporting period.

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWS NAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
AG PROCESSING (MANNING)	1457101	CARROLL	Acute Bacteria	19960001840	9/18/96	Compliance Achieved	12/2/96
		CARROLL	Non-Acute Bacteria	19960002083	9/18/96	Compliance Achieved	12/2/96
ALBURNETT COMMUNITY SCHOOL	5784531	LINN	Non-Acute Bacteria	19960001834	8/21/96	Compliance Achieved	3/17/97
		LINN	Non-Acute Bacteria	19960002086	9/17/96	Compliance Achieved	3/17/97
ANCHOR INN (GARBER)	2232776	CLAYTON	Nitrate	19960000975	4/1/96	BCA Signed	5/2/96
ANDREW JACKSON CARE	4900901	JACKSON	Non-Acute Bacteria	19970000246	11/13/96	Compliance Achieved	5/5/97
ANTHONY'S RESORT	3183877	DUBUQUE	Non-Acute Bacteria	19960001029	4/1/96	BCA Signed	11/19/96
		DUBUQUE	Non-Acute Bacteria	19960001217	5/6/96	BCA Signed	11/19/96
		DUBUQUE	Non-Acute Bacteria	19960001512	6/28/96	BCA Signed	11/19/96
ANTIQUE ACRES	0709637	BLACK HAWK	Nitrate	19960000309	1/16/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19960001010	4/1/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19960001274	6/1/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19970000029	10/1/96	BCA Signed	4/2/96
		BLACK HAWK	Nitrate	19970000124	10/23/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19970000273	11/1/96	Compliance Achieved	11/22/96
		BLACK HAWK	Nitrate	19970000409	12/1/96	Compliance Achieved	12/23/96
ARCHER DANIELS MIDLAND COMPANY # 1	2326101	CLINTON	Acute Bacteria	19960000720	3/21/96	Compliance Achieved	9/17/96
		CLINTON	Non-Acute Bacteria	19960000944	3/21/96	Compliance Achieved	4/20/96

B. The 1996 SNC MR Violations Reportspecifies the Monitoring and Reporting (MR) violations that are significant as determined by the EPA Administrator in consultation with the States. The PWSs with these significant MR violations are designated as Significant Non-Compliers (SNCs).

1. Please note that the Significant Non-Complier monitoring reporting data originated from SDWIS/FED.

2. Legend

PWS NAME	Business name of the Public Water System
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
NAME OF CONTAMINANT	An analyte which is monitored under the SDWA
VIOLATION TYPE	Type of violation
ID NUMBER	A unique and dedicated number assigned to each violation as it occurs (IDNR use only)
DATE OF VIOLATION	Date the violation occurred
TYPE OF ENFORCEMENT	Text explanation of actions taken by the PWS and/or the IDNR in response to the violation
DATE OF ACTION	Date the follow-up action or enforcement action occurred

3. Monitoring Violations (MR) - discussion of general policy:

a) Monthly monitoring requirements: The criteria for an AOP for MR violations is four or more monthly MR violations in a 12-month period. If the PWS meets this criteria, the IDNR will issue an AOP for failure to collect the required monthly

compliance samples.

b) Quarterly monitoring requirements: The criteria for an AO for MR violations is two or more quarterly MR violations in a 12-month period. If the PWS meets this criteria, the IDNR will issue an AO for failure to collect the required quarterly compliance samples.

c) Semi-annual (six-month) or greater frequency monitoring requirements: If a MR violation occurs for a contaminant on a biannual or greater sampling frequency, a NOV and a BCA is issued by the IDNR with a stipulated schedule for sample collection, which is usually one additional calendar quarter. If the PWS does not meet this deadline, the IDNR will issue an AOP for failure to collect the required compliance sample. Any MR violation of a contaminant with a biannual sampling frequency immediately meets the EPA SNC criteria. Any PWS on the SNC list must be brought back into compliance within one calendar quarter of identification from EPA to the States, otherwise IDNR must take a formal compliance action such as issuance of an AOP, or EPA may issue an NOV directly to the State or the PWS.

4. Sixty-two (62) PWSs incurred monitoring or reporting SNCs during calendar year 1996.

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWS NAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
AG PROCESSING (MANNING)	1457101	CARROLL	Acute Bacteria	19960001840	9/18/96	Compliance Achieved	12/2/96
		CARROLL	Non-Acute Bacteria	19960002083	9/18/96	Compliance Achieved	12/2/96
ALBURNETT COMMUNITY SCHOOL	5784531	LINN	Non-Acute Bacteria	19960001834	8/21/96	Compliance Achieved	3/17/97
		LINN	Non-Acute Bacteria	19960002086	9/17/96	Compliance Achieved	3/17/97
ANCHOR INN (GARBER)	2232776	CLAYTON	Nitrate	19960000975	4/1/96	BCA Signed	5/2/96
ANDREW JACKSON CARE	4900901	JACKSON	Non-Acute Bacteria	19970000246	11/13/96	Compliance Achieved	5/5/97
ANTHONY'S RESORT	3183877	DUBUQUE	Non-Acute Bacteria	19960001029	4/1/96	BCA Signed	11/19/96
		DUBUQUE	Non-Acute Bacteria	19960001217	5/6/96	BCA Signed	11/19/96
		DUBUQUE	Non-Acute Bacteria	19960001512	6/28/96	BCA Signed	11/19/96
ANTIQUE ACRES	0709637	BLACK HAWK	Nitrate	19960000309	1/16/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19960001010	4/1/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19960001274	6/1/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19970000029	10/1/96	BCA Signed	4/2/96
		BLACK HAWK	Nitrate	19970000124	10/23/96	BCA Signed	4/5/96
		BLACK HAWK	Nitrate	19970000273	11/1/96	Compliance Achieved	11/22/96
		BLACK HAWK	Nitrate	19970000409	12/1/96	Compliance Achieved	12/23/96
ARCHER DANIELS MIDLAND COMPANY # 1	2326101	CLINTON	Acute Bacteria	19960000720	3/21/96	Compliance Achieved	9/17/96
		CLINTON	Non-Acute Bacteria	19960000944	3/21/96	Compliance Achieved	4/20/96

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
ARTHUR MUNICIPAL WATER SUPPLY	4703068	IDA	Nitrate	19970000030	9/29/96	BCA Signed	8/1/97
		IDA	Nitrate	19970000155	11/13/96	BCA Signed	8/1/97
ASHLEY INN MOTEL & TRAILER CT.	1700649	CERRO GORDO	Arsenic	19970000466	12/31/96	BCA Signed	1/13/97
BEN HAVEN MOBILE HOME PARK	1074601	BUCHANAN	Non-Acute Bacteria	19960001727	9/4/96	Compliance Achieved	3/17/97
BIRMNGHAM WATER SUPPLY	8909011	VAN BUREN	Non-Acute Bacteria	19960001755	9/17/96	Compliance Achieved	2/10/97
BOONDOCKS TRUCK HAVEN CAFE	4070201	HAMILTON	Non-Acute Bacteria	19960000299	1/30/96	Compliance Achieved	8/20/96
BRANDON WATER SUPPLY	1011001	BUCHANAN	Non-Acute Bacteria	19960000197	1/15/96	Compliance Achieved	7/24/96
BURLNGTON MUNICIPAL WATERWORKS	2909053	DES MOINES	Non-Acute Bacteria	19960001580	8/7/96	Compliance Achieved	1/31/97
CALLENDER WATER SUPPLY	9417063	WEBSTER	Non-Acute Bacteria	19960001223	6/19/96	Compliance Achieved	12/4/96
CAMFABE LINCOLN	8215448	SCOTT	Acute Bacteria	19960001515	7/18/96	Compliance Achieved	3/21/97
		SCOTT	Non-Acute Bacteria	19960001660	7/18/96	Compliance Achieved	3/21/97
		SCOTT	Non-Acute Bacteria	19960001835	8/5/96	Compliance Achieved	3/21/97
CAMIEWALU-CEDAR LODGE WELL #1	2279960	CLAYTON	Non-Acute Bacteria	19960001582	8/8/96	Compliance Achieved	12/20/96
		CLAYTON	Non-Acute Bacteria	19960001828	8/26/96	Compliance Achieved	9/21/96
		CLAYTON	Non-Acute Bacteria	19960001732	9/5/96	Compliance Achieved	12/20/96
CAMIHITAGA	5792401	LINN	Non-Acute Bacteria	19960001248	6/27/96	Compliance Achieved	2/2/97
CAMIINGAWANIS-MAPLE WELL	0990401	BREMER	Acute Bacteria	19970000436	12/26/96	Compliance Achieved	7/1/97
		BREMER	Non-Acute Bacteria	19970000437	12/26/96	Compliance Achieved	7/1/97

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
CEDAR RIVER TRAILER PARK	5800601	LOUISA	Nitrate	19960000308	2/6/96	Compliance Achieved	12/2/96
		LOUISA	Nitrate	19960001124	5/22/96	Compliance Achieved	12/2/96
CEDAR TERRACE MOBILE HOME PARK	5700600	LINN	Non-Acute Bacteria	19960000283	1/24/96	Compliance Achieved	9/24/96
CLAIR-VIEW ACRES PUBLIC WATER SYSTEM	2817755	DELAWARE	Acute Bacteria	19960001690	8/22/96	Compliance Achieved	3/17/97
COALVALLEY WATER DISTRICT	0819303	BOONE	Non-Acute Bacteria	19970000112	10/28/96	Compliance Achieved	4/13/97
COIN WATER SUPPLY	7335054	PAGE	Non-Acute Bacteria	19960001244	6/26/96	Compliance Achieved	1/21/97
CONTRACTORS MACHINERY, INC.	5715105	LINN	Non-Acute Bacteria	19960001531	7/18/96	Compliance Achieved	5/27/97
		LINN	Non-Acute Bacteria	19960001667	8/15/96	Compliance Achieved	5/27/97
CORALVILLE LAKE TERRACE	5200817	JOHNSON	Non-Acute Bacteria	19960001714	8/30/96	Compliance Achieved	6/20/97
		JOHNSON	Non-Acute Bacteria	19960001859	9/25/96	Compliance Achieved	6/20/97
		JOHNSON	Non-Acute Bacteria	19970000118	10/31/96	Compliance Achieved	11/4/96
COUNTRY VIEW MOBILE HOME PARK	2400600	CRAWFORD	Acute Bacteria	19960001594	8/13/96	Compliance Achieved	7/14/97
		CRAWFORD	Acute Bacteria	19960001757	9/17/96	Compliance Achieved	7/14/97
CRESCO GOLF AND COUNTRY CLUB	4515778	HOWARD	Nitrate	19960001111	5/1/96	BCA Signed	10/4/96
		HOWARD	Nitrate	19960001572	7/1/96	BCA Signed	10/4/96
		HOWARD	Nitrate	19970000122	10/1/96	BCA Signed	10/4/96
CRYSTAL LAKE WATER SUPPLY	4115092	WINNEBAGO	Non-Acute Bacteria	19970000097	10/21/96	Compliance Achieved	9/30/97
		WINNEBAGO	Non-Acute Bacteria	19970000410	12/1/96	Compliance Achieved	9/30/97

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
)ANBJRY WATER SUPPLY	9729099	WOODBURY	Nitrate	19960001839	9/19/96	Compliance Achieved	3/12/97
)OLLVER STATE PARK	9453964	WEBSTER	Non-Acute Bacteria	19960001593	8/12/96	Compliance Achieved	9/30/97
)ONNELLSON MUNI WATER WORKS	5620046	LEE	Fluoride	19960001532	5/21/96	Compliance Achieved	2/4/97
)OT-4(I80RA 029W & 30E UNDERWOOD)	7869716	POTTAWATTAMIE	Acute Bacteria	19970000001	9/30/96	AO without Penalty	11/27/96
		POTTAWATTAMIE	Non-Acute Bacteria	19960001742	9/9/96	AO without Penalty	11/27/96
		POTTAWATTAMIE	Non-Acute Bacteria	19970000018	10/7/96	AO without Penalty	11/27/96
		POTTAWATTAMIE	Non-Acute Bacteria	19970000391	12/19/96	AO without Penalty	11/27/96
ELDRDGE WATER SUPPLY	8230008	SCOTT	Non-Acute Bacteria	19960000279	1/22/96	Compliance Achieved	7/9/96
ELKS COUNTRY CLUB	5225807	JOHNSON	Non-Acute Bacteria	19970000115	10/31/96	Compliance Achieved	5/6/97
ESSEX WATER SUPPLY	7349023	PAGE	Nitrate	19960000544	1/15/96	BCA Signed	1/17/97
		PAGE	Nitrate	19960000984	4/1/96	BCA Signed	1/17/97
		PAGE	Nitrate	19960001534	7/1/96	BCA Signed	1/17/97
		PAGE	Nitrate	19970000260	11/11/96	BCA Signed	1/17/97
		PAGE	Non-Acute Bacteria	19960001550	7/24/96	Compliance Achieved	2/11/97
F B &COMPANY	5720201	LINN	Acute Bacteria	19960001102	4/22/96	Compliance Achieved	2/19/97
		LINN	Non-Acute Bacteria	19960001103	4/22/96	Compliance Achieved	2/19/97
FILLMORE BAR AND GRILL	3118729	DUBUQUE	Non-Acute Bacteria	19960001247	6/28/96	Compliance Achieved	1/28/97
FORTDODGE ANIMAL HEALTH-CHARLES CITY	3405120	FLOYD	Non-Acute Bacteria	19970000025	10/8/96	Compliance Achieved	4/8/97

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
GALVA WATER SUPPLY	4715072	IDA	Benzene	19960001562	7/1/96	BCA Signed	9/5/96
		IDA	Benzene	19970000280	10/1/96	BCA Signed	9/5/96
		IDA	Benzene	19960000763	3/26/96	BCA Signed	9/5/96
GEORGE WATER SUPPLY	6028081	LYON	Nitrate	19960000547	1/9/96	Compliance Achieved	3/3/97
		LYON	Nitrate	19960000977	4/1/96	Compliance Achieved	4/26/96
		LYON	Nitrate	19960000772	4/9/96	Compliance Achieved	3/3/97
		LYON	Nitrate	19960001521	7/1/96	Compliance Achieved	3/3/97
GOLDKEY MOTEL	3544720	FRANKLIN	Acute Bacteria	19960000194	1/11/96	Compliance Achieved	8/22/96
		FRANKLIN	Non-Acute Bacteria	19960000651	1/11/96	Compliance Achieved	3/9/96
GRANT PARK	8150401	SAC	Non-Acute Bacteria	19960001663	8/16/96	Compliance Achieved	4/30/97
HAVELOCK WATER SUPPLY	7609039	POCAHONTAS	Non-Acute Bacteria	19970000120	10/30/96	Compliance Achieved	5/21/97
HICKORY ESTATES	8227301	SCOTT	Acute Bacteria	19970000006	10/2/96	Compliance Achieved	6/25/97
		SCOTT	Non-Acute Bacteria	19960002087	10/2/96	Compliance Achieved	6/25/97
HICKORY GROVE (GOLF COURSE)	3353746	FAYETTE	Nitrate	19960001016	4/1/96	Compliance Achieved	10/28/96
HIDDEN ACRES COUNTRY CLUB	9778840	WOODBURY	Non-Acute Bacteria	19960001230	6/24/96	Compliance Achieved	6/2/97
HOLSTEIN, CITY OF	4721054	IDA	Nitrate	19960000546	1/9/96	Compliance Achieved	7/9/96
HUBBARD GOLF & RECREATION	4254801	HARDIN	Non-Acute Bacteria	19970000102	10/24/96	Compliance Achieved	9/30/97
HWY#3 MOBILE HOME PARK	0900601	BREMER	Non-Acute Bacteria	19960001752	9/16/96	Compliance Achieved	3/17/97

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
-35 TIUCKSTOP, INC.	4070204	HAMILTON	Non-Acute Bacteria	19960000719	3/18/96	Compliance Achieved	11/13/96
NDIAN HILLS GOLF & COUNTRY CLUB	5879826	LOUISA	Non-Acute Bacteria	19970000144	11/4/96	Compliance Achieved	7/28/97
NDIANOLA WATER SUPPLY	9133075	WARREN	Non-Acute Bacteria	19960001155	6/17/96	Compliance Achieved	12/19/96
NTERSTATE POWER COMPANY	0345181	ALLAMAKEE	Non-Acute Bacteria	19960001279	7/15/96	Compliance Achieved	7/24/96
RA WATER ASSOCIATION	5031301	JASPER	Nitrite	19970000279	12/31/96	Public Notice Received	12/12/96
ANESVILLE WATER SUPPLY	0932001	BREMER	Nitrate	19970000311	10/1/96	Compliance Achieved	7/19/97
K MART	3353201	FAYETTE	Nitrate	19960000542	1/15/96	Compliance Achieved	9/16/96
KAMMERER TRAILER COURT	7000686	MUSCATINE	Non-Acute Bacteria	19970000276	11/25/96	Compliance Achieved	7/14/97
KELLOGG WATER SUPPLY	5038017	JASPER	Non-Acute Bacteria	19960001048	5/1/96	Compliance Achieved	11/18/96
KIRKMAN WATER SUPPLY	8350033	SHELBY	Acute Bacteria	19960001836	8/26/96	Compliance Achieved	6/22/97
		SHELBY	Non-Acute Bacteria	19960001837	8/26/96	Compliance Achieved	3/10/97
KUM & GO STORE #443	4884784	IOWA	Acute Bacteria	19960000193	1/4/96	Compliance Achieved	6/25/96
LAKEWOOD UTILITIES	9433324	WEBSTER	Non-Acute Bacteria	19960001113	5/1/96	Compliance Achieved	4/7/97
		WEBSTER	Non-Acute Bacteria	19960001220	5/20/96	Compliance Achieved	4/7/97
LONGBRANCH MAINTENANCE CORP.	3900300	GUTHRIE	Fluoride	19960001266	1/1/96	BCA Signed	12/20/96
		GUTHRIE	Fluoride	19960001267	4/1/96	BCA Signed	12/20/96
		GUTHRIE	Fluoride	19960001731	8/13/96	BCA Signed	12/20/96
		GUTHRIE	Fluoride	19970000448	12/16/96	BCA Signed	12/20/96

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
LOWELL'S HOA ASSOC	2268837	CLAYTON	Non-Acute Bacteria	19960001657	7/24/96	Compliance Achieved	1/28/97
LU VERNE WATER SUPPLY	5551006	KOSSUTH	Non-Acute Bacteria	19970000411	12/1/96	Compliance Achieved	6/1/97
LYONSIOUX RWS-BOYDEN	6000744	LYON	Nitrate	19960000560	2/6/96	Compliance Achieved	8/12/96
MALONE CREEK ESTATES, INC.	1000902	BUCHANAN	Non-Acute Bacteria	19960001595	8/12/96	Compliance Achieved	3/17/97
MANLY WATER SUPPLY	9845024	WORTH	Non-Acute Bacteria	19970000027	10/8/96	Compliance Achieved	4/9/97
MAPLETON MUNICIPAL WATER PLANT	6727028	MONONA	Nitrate	19960000549	1/3/96	Compliance Achieved	7/10/96
MAYSVILLE MUNICIPAL WATER DEPT	8255060	SCOTT	Acute Bacteria	19960000657	3/12/96	Compliance Achieved	11/5/96
		SCOTT	Non-Acute Bacteria	19960000717	3/12/96	Compliance Achieved	11/5/96
MEADOW VIEW COUNTRY CLUB	5722748	LINN	Non-Acute Bacteria	19960001032	4/1/96	AO with Penalty	9/2/97
MEREDITH PARK	7633902	POCAHONTAS	Nitrate	19960001036	5/9/96	Compliance Achieved	6/30/97
		POCAHONTAS	Nitrate	19960001225	6/1/96	Compliance Achieved	6/30/97
		POCAHONTAS	Nitrate	19960001265	7/1/96	Compliance Achieved	6/30/97
MIKES FISHERMAN'S WHARF	3126204	DUBUQUE	Non-Acute Bacteria	19960001734	9/3/96	Compliance Achieved	4/4/97
MILLERSBURG WATER DEPT	4852082	IOWA	Nitrite	19960000792	2/29/96	Compliance Achieved	11/27/96
MINIFARM ACRES	1689402	CEDAR	Acute Bacteria	19960001574	8/5/96	Compliance Achieved	6/2/97
		CEDAR	Non-Acute Bacteria	19960001656	8/5/96	Compliance Achieved	6/2/97
		CEDAR	Non-Acute Bacteria	19960001707	8/27/96	Compliance Achieved	6/2/97
		CEDAR	Non-Acute Bacteria	19970000145	11/4/96	Compliance Achieved	6/2/97

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
MODERN MANOR MOBILE HOME PARK	5225601	JOHNSON	Acute Bacteria	19960001691	8/22/96	Compliance Achieved	1/23/97
		JOHNSON	Non-Acute Bacteria	19960001833	8/22/96	Compliance Achieved	1/23/97
MOORHEAD WATER SUPPLY	6731006	MONONA	Non-Acute Bacteria	19970000274	11/20/96	Compliance Achieved	8/20/97
MOUNT AYR WATER TREATMENT PLANT	8055014	RINGGOLD	Trihalomethanes (Total)	19970000259	12/31/96	Public Notice Received	12/12/96
MSI MOLD BUILDERS	5715106	LINN	Non-Acute Bacteria	19960001269	7/8/96	Compliance Achieved	3/5/96
NEOLA LIGHT & WATER	7853043	POTTAWATTAMIE	Non-Acute Bacteria	19960001147	6/1/96	AO with Penalty	7/29/96
		POTTAWATTAMIE	Non-Acute Bacteria	19960001513	6/24/96	Compliance Achieved	7/20/96
NEOWA FS, INC.	1031201	BUCHANAN	Nitrate	19970000149	10/1/96	Compliance Achieved	8/1/97
NEW FRONTIER MOTEL	8503703	STORY	Non-Acute Bacteria	19960001275	7/9/96	Compliance Achieved	7/14/97
NEW HAMPTON GOLF & COUNTRY CLUB	1970202	CHICKASAW	Nitrate	19960001011	4/1/96	Compliance Achieved	9/10/96
NORTH END MOBILE HOME PARK	3100609	DUBUQUE	Acute Bacteria	19970000148	11/6/96	Compliance Achieved	7/1/97
NORTHWEST IOWA POWER COOPERATIVE	7540165	PLYMOUTH	Non-Acute Bacteria	19960000306	2/5/96	Compliance Achieved	7/26/96
		PLYMOUTH	Non-Acute Bacteria	19960000652	2/20/96	Compliance Achieved	7/26/96
NORTHWOOD ESTATES	5225308	JOHNSON	Non-Acute Bacteria	19970000247	11/14/96	Compliance Achieved	6/27/97
OAKSGOLF COURSE	8503205	STORY	Non-Acute Bacteria	19960001530	7/19/96	Compliance Achieved	4/14/97
OBIES WEST	4938205	JACKSON	Acute Bacteria	19960001272	7/10/96	Compliance Achieved	1/28/97
ORDER OF EAGLES/AERIE 4074	0709207	BLACK HAWK	Nitrate	19960001273	6/1/96	Compliance Achieved	6/30/97
		BLACK HAWK	Nitrate	19960001552	7/1/96	Compliance Achieved	6/30/97

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
)RDE\ OF EAGLES/AERIE 4074	0709207	BLACK HAWK	Nitrate	19970000111	10/1/96	Compliance Achieved	6/30/97
)RIENT MUNICIPAL WATER SUPPLY	0160099	ADAIR	Non-Acute Bacteria	19970000067	10/17/96	Compliance Achieved	5/12/97
)SAG\ MUNICIPAL WATER SUPPLY	6663001	MITCHELL	Non-Acute Bacteria	19970000023	10/8/96	Compliance Achieved	4/23/97
)SCE♦LA WATER WORKS	2038038	CLARKE	Trihalomethanes (Total)	19970000093	9/30/96	Public Notice Received	11/14/96
		CLARKE	Trihalomethanes (Total)	19970000492	12/31/96	Public Notice Received	1/30/97
)TTE\ CREEK GOLF COURSE	7709810	POLK	Non-Acute Bacteria	19960001549	7/24/96	Compliance Achieved	2/5/97
².M. PARK TRUSTEES-EAST	1716422	CERRO GORDO	Non-Acute Bacteria	19960001710	8/29/96	Compliance Achieved	3/10/97
²AGE\ RURAL WATER DISTRICT	7383901	PAGE	Non-Acute Bacteria	19960001677	8/20/96	Compliance Achieved	8/31/97
²ANORA WATER WORKS	3971026	GUTHRIE	Nitrate	19960001519	7/8/96	Compliance Achieved	7/23/96
²ATHWAY CHRISTIAN SCHOOL	9233501	WASHINGTON	Non-Acute Bacteria	19960001851	9/23/96	Compliance Achieved	5/5/97
		WASHINGTON	Non-Acute Bacteria	19970000275	11/20/96	Compliance Achieved	5/5/97
²INEVIEW CAMPGROUND	0315616	ALLAMAKEE	Non-Acute Bacteria	19960001589	8/9/96	Compliance Achieved	7/1/97
²IRILO'S SPORTSMAN LOUNGE	3300770	FAYETTE	Non-Acute Bacteria	19960001848	9/24/96	Compliance Achieved	5/28/97
PISGAH WATER SUPPLY	4364044	HARRISON	Non-Acute Bacteria	19970000245	10/17/96	Compliance Achieved	8/19/97
PLUMCREEK GOLF CLUB	1940827	CHICKASAW	Nitrate	19960001028	5/1/96	Compliance Achieved	5/17/96
POCAHONTAS WATER DEPT	7633049	POCAHONTAS	Non-Acute Bacteria	19960001250	7/1/96	Compliance Achieved	3/3/97
PONDEROSA TRUCK STOP	6525769	MILLS	Nitrate	19960001238	6/1/96	Compliance Achieved	2/26/97
PONYCREEK #1 HOA/PEOPLES SERVICE	6500823	MILLS	Non-Acute Bacteria	19970000098	10/23/96	Compliance Achieved	4/15/97

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
POWER PRO	1970101	CHICKASAW	Non-Acute Bacteria	19970000026	10/8/96	Compliance Achieved	5/27/97
		CHICKASAW	Non-Acute Bacteria	19970000117	10/28/96	Compliance Achieved	5/27/97
REGIONAL WATER	8300184	POTTAWATTAMIE	Non-Acute Bacteria	19960001277	7/9/96	Compliance Achieved	2/1/97
REVERE 6TH & 7TH ADDITION	8215301	SCOTT	Non-Acute Bacteria	19960001692	8/21/96	Compliance Achieved	1/27/97
RIVERSIDE LUTHERAN BIBLE CAMP	8584401	HAMILTON	Non-Acute Bacteria	19960001529	4/30/96	AO with Penalty	8/29/96
		HAMILTON	Non-Acute Bacteria	19960001527	6/6/96	AO with Penalty	8/29/96
ROCKFALLS LOUNGE	1769767	CERRO GORDO	Acute Bacteria	19960001696	8/22/96	Compliance Achieved	10/11/96
ROCKVALLEY WATER SUPPLY	8482096	SIOUX	Non-Acute Bacteria	19970000261	11/12/96	Compliance Achieved	5/12/97
ROCKFORD WATER SUPPLY	3430091	FLOYD	Non-Acute Bacteria	19960001753	9/11/96	Compliance Achieved	4/9/97
RODNEY WATER SUPPLY	6743930	MONONA	Nitrate	19960000541	1/29/96	Compliance Achieved	7/7/97
		MONONA	Nitrate	19960000986	4/1/96	Compliance Achieved	7/7/97
		MONONA	Nitrate	19960001533	7/1/96	Compliance Achieved	7/7/97
		MONONA	Nitrate	19970000034	10/7/96	Compliance Achieved	7/7/97
ROOKWOOD SUBDIVISION-EAST	8503302	STORY	Non-Acute Bacteria	19970000024	10/7/96	Compliance Achieved	4/7/97
SAC COUNTY GOLF AND COUNTRY CLUB	8144817	SAC	Nitrate	19960000974	4/1/96	Compliance Achieved	10/8/96
SCATTERGOOD FRIENDS SCH-DORM	1694561	CEDAR	Non-Acute Bacteria	19970000378	12/16/96	Compliance Achieved	5/8/97
SCATTERGOOD FRIENDS SCH-MAIN	1694562	CEDAR	Acute Bacteria	19960001592	8/12/96	Compliance Achieved	6/9/97
		CEDAR	Non-Acute Bacteria	19960000582	2/28/96	Compliance Achieved	5/8/97

1996 MCL VIOLATIONS

This data extracted from Iowa's WSFL database

IX. A. FULL REPORT - TABLE B

PWSNAME	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	ID NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
SCHLISWIG MUNIC WATER SUPPLY	2446029	CRAWFORD	Nitrate	19960000548	1/22/96	Compliance Achieved	1/17/97
		CRAWFORD	Nitrate	19960001018	4/23/96	Compliance Achieved	1/17/97
		CRAWFORD	Nitrate	19960001278	7/1/96	Compliance Achieved	1/17/97
SEARSBORO WATER SUPPLY	7955032	POWESHIEK	Non-Acute Bacteria	19960001246	6/25/96	Compliance Achieved	12/11/96
SILVERCREST GOLF & COUNTRY CLUB, INC.	9630882	WINNESHIEK	Acute Bacteria	19960001044	5/1/96	BCA Signed	12/7/95
		WINNESHIEK	Non-Acute Bacteria	19960001221	5/16/96	BCA Signed	12/7/95
SIOUX CITY WATER SUPPLY	9778054	WOODBURY	Acute Bacteria	19960001231	6/24/96	Compliance Achieved	11/23/97
SOUTHDALE HOME OWNERS ASS'N	5500822	KOSSUTH	Non-Acute Bacteria	19960001852	9/24/96	Compliance Achieved	9/30/97
SPRING LAKE STATE PARK	3742950	GREENE	Non-Acute Bacteria	19960001264	7/8/96	Compliance Achieved	8/27/97
SPRINGBROOK COUNTRY CLUB	2330847	CLINTON	Non-Acute Bacteria	19960001046	4/1/96	Compliance Achieved	6/30/97
		CLINTON	Non-Acute Bacteria	19960001216	5/15/96	Compliance Achieved	6/30/97
		CLINTON	Non-Acute Bacteria	19960001245	6/24/96	Compliance Achieved	6/30/97
SPRUCE CREEK PARK # 5	4910404	JACKSON	Nitrate	19960001540	1/1/96	Compliance Achieved	10/2/96
SQUAW CREEK-BLDG #104, W.S. #22-33	5720924	LINN	Non-Acute Bacteria	19960001148	6/13/96	Compliance Achieved	1/28/97
ST CHARLES WATER SUPPLY	6161031	MADISON	Non-Acute Bacteria	19960001711	8/26/96	Compliance Achieved	2/19/97
SUNNYSIDE VILLAGE MOBILE PARK	4300600	HARRISON	Non-Acute Bacteria	19970000248	11/12/96	Compliance Achieved	5/5/97
SUPERIOR WATER SYSTEM	3073001	DICKINSON	Acute Bacteria	19960001830	8/12/96	Compliance Achieved	2/11/97
		DICKINSON	Non-Acute Bacteria	19960001831	8/12/96	Compliance Achieved	2/11/97

1996 MCL VIOLATIONS

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IX. A. FULL REPORT - TABLE B

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SWEENEYS	3126732	DUBUQUE	Non-Acute Bacteria	19960001832	8/19/96	Compliance Achieved	4/1/97
SYCAMORE APARTMENTS	5525807	JOHNSON	Non-Acute Bacteria	19970000277	11/25/96	Compliance Achieved	7/29/97
THAT PLACE, INC.	3809768	GRUNDY	Non-Acute Bacteria	19970000116	10/30/96	Compliance Achieved	9/30/97
THE BARN (SHERRILL)	3183722	DUBUQUE	Acute Bacteria	19960001237	6/25/96	Compliance Achieved	3/21/97
		DUBUQUE	Non-Acute Bacteria	19960001511	6/25/96	Compliance Achieved	3/21/97
		DUBUQUE	Non-Acute Bacteria	19960001280	7/12/96	Compliance Achieved	3/21/97
THE NEW SHACK TAVERN	5715812	LINN	Non-Acute Bacteria	19960001236	6/25/96	Compliance Achieved	2/19/97
TIMBIR VALLEY ESTATES	8215384	SCOTT	Acute Bacteria	19960001666	8/13/96	Compliance Achieved	1/29/97
UNDERWOOD WATER SUPPLY	7869037	POTTAWATTAMIE	Nitrate	19960000545	1/15/96	Compliance Achieved	1/20/97
		POTTAWATTAMIE	Nitrate	19960001121	4/1/96	Compliance Achieved	1/20/97
VIOLA ELEMENTARY SCHOOL	5790501	LINN	Non-Acute Bacteria	19970000119	11/1/96	Compliance Achieved	6/1/97
WALISCHMIDT SUBDIVISION	9260301	WASHINGTON	Non-Acute Bacteria	19960001758	9/16/96	Compliance Achieved	5/17/97
WAPSE VALLEY COMM SCH-ORAN	3357501	BUCHANAN	Non-Acute Bacteria	19960001745	9/9/96	Compliance Achieved	3/10/97
WARREN WATER DISTRICT	9133701	WARREN	Non-Acute Bacteria	19960001041	5/1/96	Compliance Achieved	6/5/96
WAUKEE WATER SUPPLY	2573080	DALLAS	Non-Acute Bacteria	19960001693	8/22/96	Compliance Achieved	2/3/97
WESTMORE ROAD AND WATER ASSN.	8222304	SCOTT	Non-Acute Bacteria	19960001271	7/9/96	Compliance Achieved	5/5/97
		SCOTT	Non-Acute Bacteria	19960001581	8/6/96	Compliance Achieved	8/13/96
WHITE OAKS HOMEOWNERS ASSOCIATION	7709302	POLK	Fluoride	19970000284	12/31/96	AO with Penalty	5/31/95

1996 MCL VIOLATIONS

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IX. A. FULL REPORT - TABLE B

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WHITE OAKS HOMEOWNERS ASSOCIATION	7709302	POLK	Fluoride	19960001568	7/1/96	AO with Penalty	5/31/95
WOODLYN HILLS	5502319	KOSSUTH	Non-Acute Bacteria	19970000803	12/30/96	Compliance Achieved	9/9/97
XENIA RURAL WATER DISTRICT (SOUTHWEST)	2573701	DALLAS	Non-Acute Bacteria	19960001847	9/24/96	Compliance Achieved	3/4/97

GLOSSARY

AL.....Action Level
AOP.....Administrative Order with Penalty
AOWP.....Administrative Order without Penalty
CT.....Contact Time of residual disinfectant
EPA.....Environmental Protection Agency
IDNR.....Iowa Department of Natural Resources
IOC.....Inorganic Chemicals
MCL.....Maximum Contaminant Level
mg/L.....Milligrams per liter
MR.....Monitoring and Reporting
mrem/yr.....Millirems per year
NOV.....Notice of Violation
NTU.....Nephelometric Turbidity Units
pCi/L.....Picocuries per liter
PWSs... .....Public Water Systems
PWSS.....Public Water System Supervision (EPA program)
SDWA.....Safe Drinking Water Act
SDWIS/FED...Safe Drinking Water Information System/Federal (EPA's) electronic database)
SNC.....Significant Non-Complier
SOC.....Synthetic (Nonvolatile) Organic Chemical
SWTR.....Surface Water Treatment Rule
TT.....Treatment Technique
VOC.....Volatile Organic Chemicals
WSFL.....Water System Facility List (Iowa's electronic database)

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