UNITED STATES VIRGIN ISLANDS
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
PUBLIC WATER SYSTEMS SUPERVISION PROGRAM

U. S. VIRGIN ISLANDS
ANNUAL PUBLIC WATER SYSTEM
COMPLIANCE REPORT FOR
CALENDAR YEAR 2002

Prepared August 2003
DPNR/DEP/PWSS

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1.0 Introduction

Each State and Territory with primacy is required by section 1414(c)(3)(A)(i) of the Federal Safe Drinking Water Act (SDWA) Amendments of 1996 to prepare an Annual Public Water System Compliance Report. These annual compliance reports provide information on events or lack of activity that constituted a violation of the SDWA by a public water system (PWS) at some time during the calendar year covered by the report.

The Department of Planning and Natural Resources' (DPNR's) intention through this report is to inform the citizens of and visitors to the United States Virgin Islands (USVI) about how well the PWSs of the USVI are complying with the requirements of the SDWA. As mandated by law, these reports must be submitted to the U.S. Environmental Protection Agency (EPA) and made readily available to the public. The ***U.S. Virgin Islands Annual Public Water System Compliance Report for Calendar Year 2002*** is available at DPNR's, Division of Environmental Protection (DEP). It is also available at all public libraries, the University of the Virgin Islands' (UVI) library, UVI's Water Resource Research Institute, and at local laboratories.

EPA will prepare an annual national violations report which summarizes and evaluates the States' and Territories' report. EPA's report must also make recommendations concerning the resources needed to improve compliance with the SDWA, and must include information on PWSs in Indian reservations.

1.1 Public Water Systems

Federal law defines a public water system as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections, or serves an average of at least 25 people for at least 60 days each year. In recognition of the USVI's unique characteristics and resource management needs, local laws are more stringent, requiring at least 8 service connections or 20 people served for at least 60 days. There are three classifications of public water systems depending on how regularly a set population is supplied with the water. A PWSs is designated a Community Public Water System (CPWS) if it regularly serves the same people all year round (i.e., WAPA and apartment complexes). A Non-transient, Non-community Public Water System (NTNCPWS) regularly serves the same people for at least six months out of the year (i.e., schools and businesses). Transient, Non-community Public Water Systems (TNCPWS)serve different people at least sixty days out of the year (i.e., hotels and restaurants). For this report, the use of the acronym "PWS" refers to public water systems of all three types, as well as bottled water plants and ice manufactures, unless specified in greater detail.

There were approximately 350 active PWSs on the three islands of St. Thomas, St. Croix and St. John in calendar year 2002. The number of PWSs is continually changing due to businesses opening and closing. Some systems also become inactive water systems because they utilize a direct connection to the Virgin Islands Water and Power Authority (WAPA) as their only source of water. The Virgin Islands Water and Power Authority's (WAPA) desalinization plants on St. Thomas and St. Croix are the largest public water systems in the USVI. The WAPA St. Thomas system serves approximately 29,000 residents on a regular basis, this does not include the transient population which includes tourists. The WAPA St. Croix system serves approximately 35,000 residents on a regular basis. The majority of public water systems in the USVI, however, serve between 25 to 1000 individuals. These facilities, for the most part, utilize rainwater collection systems augmented by trucked water for the provision of potable water. The use of reverse osmosis treatment units to produce potable water from brackish wells or sea water is increasing throughout the Territory.

1.2 THE PUBLIC WATER SYSTEM SUPERVISION PROGRAM: AN OVERVIEW

EPA established the Public Water System Supervision (PWSS) program under the authority of the 1974 SDWA. As directed by the SDWA and Amendments, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as maximum contaminant levels (MCLs). For some regulations, EPA has established treatment techniques in place of an MCL to control unacceptable levels of a contaminant in water. The EPA has also developed frequencies for which public water systems (PWSs) must monitor their water for contaminants. PWSs are required to report the monitoring data to the States, Territories, or to EPA. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for the development of future drinking water regulations. Finally, EPA requires PWSs to notify the public when they have violated these regulations.

The SDWA applies to the 50 States, the District of Columbia, Indian Lands, the U.S. Virgin Islands, Puerto Rico, 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 their own PWSS programs. The authority to run a PWSS program is called primacy. To receive primacy, States and Territories must meet certain requirements described in the Federal SDWA and regulations. States and Territories must adopt drinking water regulations that are at least as stringent as the Federal regulations. To obtain primacy, a State or Territory must also demonstrate that they can enforce the requirements of the SDWA.

The United States Virgin Islands promulgated the Virgin Islands Safe Drinking Water Act (VISDWA) in 1975 under 19 Virgin Islands Code (V.I.C.) Section 1303. In 1977, the drinking water Rules and Regulations were issued as Title 19, Part VI, Chapter 51, Subchapter 1303, Sections

1303-11 to 1303-53, Drinking Water Standards. After the Virgin Islands demonstrated their ability to enforce the SDWA, EPA transferred primacy from EPA Region 2 to the USVI Department of Conservation and Cultural Affairs in 1979. This department was officially restructured and named the Department of Planning and Natural Resources (DPNR) in 1987 and the authority for enforcement of the Drinking Water Standards was given to the Commissioner of DPNR by Title 19, Part VI, Chapter 51, Subchapter 1309. The Virgin Islands' PWSS program is now administered through the DPNR's Division of Environmental Protection.
Amendments to the VISDWA added Sections 1303-54 through 1303-70 in 1994 to fulfill primacy requirements which were added to the Federal SDWA by the 1986 Amendments. In January 1998, DPNR was given the legislative authority to regulate locally produced and imported bottled water and ice.

1.3 VIOLATIONS OF THE SAFE DRINKING WATER ACT

This Annual Public Water System Compliance Report provides a summary of the number of violations of the categories listed in section 1414(c)(3) of the Federal Safe Drinking Water Act Reauthorization. These categories include but is not limited to the following:

- **maximum contaminant level (MCL) violations;**
- **treatment technique requirement (TT) violations;**
- **significant violations of monitoring and reporting (M/R) requirements;**
- **violations of variances and exemptions; and**
- **significant violations of consumer notification requirements.**

Primacy States and Territories submit data to the EPA's Safe Drinking Water Information System (SDWIS/FED) on a quarterly basis. Data include PWS inventory statistics, the incidence of MCL exceedances, major M/R violations, and TT. The enforcement actions taken against the violators is also submitted to SDWIS/FED..

Maximum Contaminant Levels (MCL)

Under the Federal SDWA, the EPA sets national limits on the level that contaminants may be present in drinking water. These limits are known as Maximum Contaminant Levels (MCLs). MCLs were developed to ensure that the water is safe for human consumption. The levels set by EPA for each contaminant are amounts of that contaminant that can be present in the water without causing adverse health effects to humans or pose health risks over a long period of time. The Virgin Islands SDWA and Drinking Water Standards adopted all of the contaminants and MCLs regulated by the Federal SDWA.

When a PWS exceeds a MCL, it is required to notify the public of the exceedance. Notices for

violating the MCL of a contaminant with potential to have a "serious adverse effect" must contain an explanation of the violation, the potential health effects, what the system is doing to correct the problem, and whether consumers need to use an alternate source of water. Notices must be given to the public within 24 hours after the occurrence of the violation and the notice must run for at least three consecutive days. Violations which occurred in 2002 for exceeding MCLs are discussed in Section 3 of this report .

Monitoring & Reporting Requirements (M/R)

A PWS is required to monitor for water quality parameters and to verify that the levels of contaminants present in the water do not exceed the MCLs. If the PWS fails to have its water tested as required by the VISDWA, then a monitoring violation occurs. A reporting violation occurs when the PWS does not report test results correctly to the primacy agency. In the Virgin Islands, the proper authority to report monitoring data to is the Division of Environmental Protection's Public Water System Supervision program.

For this report, significant M/R violations are defined as any major monitoring and reporting violation that occurred during calendar year 2002. A major M/R violation occurs when no samples were taken or no results were reported during a compliance period. A compliance period varies for different contaminants. For example, biological testing for total Coliform must be done on a monthly basis, on the other hand, testing for nitrates must occur annually. Significant M/R violations which occurred in calendar year 2002 are discussed in Section 3 of this report.

Treatment Techniques (TT)

For some regulations, the EPA establishes treatment techniques in lieu of an MCL. Treatment techniques are required for contaminants that laboratories cannot adequately measure. For example, EPA requires a water disinfection process instead of an MCL for viruses, bacteria, and turbidity.

Under the Lead and Copper Rule, corrosion control treatment is required for the control of lead and copper in drinking water. Although a specific treatment technique is not dictated by the rules and regulations, the corrosion control treatment must be reviewed and approved by DPNR before it may be implemented by the public water system. There were no treatment technique violations in the Virgin Islands during calendar year 2002.

Variances and Exemptions

Variances and exemptions to specific requirements under the SDWA Amendments of 1996 may be granted under certain circumstances. If a PWS cannot meet the MCL, due to the characteristics of the raw water sources reasonably available, a primacy State (Territory) can grant the PWS a variance from the applicable primary drinking water regulation on the condition that the system install the best available technology, treatment techniques, or other means which the Administer finds are

available. The State (Territory) must find that the variance will not result in an unreasonable risk to public health. An exemption may be granted by a primacy State (Territory) to relieve a PWS from its obligation to comply with a MCL if the systems' noncompliance results from compelling factors. The PWS will be required to come into compliance with the MCL as expeditiously as practicable, but no later than three years after the otherwise applicable compliance date. No variances or exemptions have been given to any PWS in the Virgin Islands, therefore, there were no violations for this category during calendar year 2002.

Consumer Notification Requirements

A PWS is required to notify persons served when it fails to comply with the requirements of the SDWA or are facing other situations posing a risk to public health. The 1996 Amendments to the SDWA require public notification (PN) to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation, and the possibility of the provision of alternative water supplies during the violation.

In addition to PN, the 1996 Amendments to the SDWA requires community public water systems (CPWSs) to prepare and provide to their customers annual consumer confidence reports (CCR) on the quality of the water delivered by the system. These reports provide valuable information to customers of CPWS and allow them to make personal health-based decisions regarding their drinking water consumption.

Contaminant Waivers

The Department of Planning & Natural Resources fully utilizes the waiver provisions provided by the Federal regulations. Under these regulations, DPNR is allowed to develop waiver programs that reduce or eliminate a public water system's monitoring requirements. Waivers are based mainly upon two criteria: 1) analytical results of previous sampling, and 2) a vulnerability assessment. Waivers based on analytical results may use data collected prior to initial monitoring (grandfathered) or data collected to meet the initial monitoring requirements. A vulnerability assessment involves two steps: 1) *Use Waiver*: A determination is made whether a given contaminant was used, manufactured, and/or stored in an area that possibly would affect the water quality of a public water system; and 2) *Susceptibility Waiver*: An assessment of the water source is made to determine a public water system's susceptibility to contamination.

A number of individual public water systems have received waivers for volatile organic compounds (VOCs) and inorganic contaminants (IOCs) based on analytical results of previous sampling. DPNR has initiated a synthetic organic compound (SOC) waiver procedure to determine which SOCs could qualify for either a use waiver or a susceptibility waiver. DPNR hopes that this procedure will identify a select group of SOCs for which monitoring may be waived for all public water systems in the Virgin Islands. Since roof catchment is the most common source of drinking water in the

Virgin Islands, DPNR will consider granting susceptibility waivers to a selected group of small roof catchment systems on a case-by-case basis if they can provide information which verifies that no regulated organic contaminants or other toxic chemicals which may cause a concern for adverse health effects are contained in the roof coating.

2.0 Table of Significant Violations

2.1 TOTAL COLIFORM RULE

Virgin Islands
2002

	MCL (Mg/l)	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
Total Coliform Rule							
Acute MCL violation	Presence	52	42				
Non-acute MCL violation	Presence	12	11				
Major routine and follow up monitoring						57	36
Sanitary survey						0	0
Total		64	51*			57	36

**2 PWS had both acute and non-acute MCL violations*

2.2 LEAD & COPPER RULE

Virgin Islands
2002

	MCL (Mg/l)	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
Lead and Copper Rule							
Initial lead and copper tap M/R						0	0
Follow-up or routine lead and copper tap M/R						0	0
Treatment Installation				0	0		
Public education				0	0		
Total				0	0	0	0

2.3 INORGANIC CHEMICAL CONTAMINANTS

Virgin Islands

2002

	MCL (Mg/l)	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
Inorganic Contaminants							
Antimony	0.006	0	0			0	0
Arsenic	0.05	0	0			0	0
Asbestos	7 million fiber/l ≤ 10 um 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	0			0	0
Mercury	0.002	0	0			0	0
Nitrate	10 (as Nitrogen)	0	0			34	34
Nitrite	1 (as Nitrogen)	0	0			0	0
Selenium	0.05	0	0			0	0
Thallium	0.002	0	0			0	0
Total nitrate & nitrite	10 (as Nitrogen)	0	0			0	0
Total		0	0			34	34

2.4 ORGANIC CHEMICAL CONTAMINANTS

Virgin Islands

2002

	MCL (Mg/l)	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
Organic Contaminants							
1,1,1-Trichloroethane	0.2	0	0			0	0
1,1-Dichlororthylene	0.007	0	0			0	0
1,1,2-Trichloroethane	0.005	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		
Alachlor	0.002	0	0			0	0
Atrazine	0.003	0	0			0	0
Benzene	0.005	0	0			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
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				0	0		
Ethylbenzene	0.7	0	0			0	0

2.4 ORGANIC CHEMICAL CONTAMINANTS

Virgin Islands

2002

	MCL (Mg/l)	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
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
Monochlorobenzene	0.1	0	0			0	0
o-Dichlorobenzene	0.6	0	0			0	0
para-Dichlorobenzene	0.075	0	0			0	0
Total polychlorinated biphenyls	0.0005	0	0			0	0
Pentachlorophenol	0.001	0	0			0	0
Tetrachloroethylene	0.005	0	0			0	0
Trichloroethylene	0.005	0	0			0	0
Styrene	0.1	0	0			0	0
Toluene	1	0	0			0	0
trans-1,2-Dichloroethylene	0.1	0	0			0	0
Xylenes (total)	10	0	0			0	0
Toxaphene	0.003	0	0			0	0
Oxamyl (Vydate)	0.2	0	0			0	0
Picloram	0.5	0	0			0	0
Simazine	0.004	0	0			0	0
Vinyl chloride	0.002	0	0			0	0
Total trihalomethanes	0.1	0	0			0	0
Total		0	0			0	0

2.5 RADIOLOGICAL CONTAMINANTS

Virgin Islands

2002

	MCL (Mg/l)	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
Radionuclides							
Gross alpha	15 pCi/l	0	0			0	0
Radium-226 and radium-228	5 pCi/l	0	0			0	0
Gross beta	4 mrem/yr	0	0			0	0
Total		0	0			0	0

3.0 Summary of 2002 Violations

3.1 TOTAL COLIFORM RULE - MCL VIOLATIONS

Pathogens are disease causing microorganisms. Bacterial diseases include typhoid, salmonellosis, shigellosis, bacterial dysentery, and asiatic cholera. Giardia and Cryptosporidium are caused by protozoans and can cause gastroenteritis. Organisms which cause diseases are usually transmitted through feces and urine, although they can also be found in animals and soil reservoirs. Many microorganisms can be found in water. Bacteria from sewage and animal wastes have presented the most frequent and immediate health risks to public water supplies over the years. Protecting our water sources and employing proper treatment techniques are key to providing safe drinking water to the public. It is difficult, not to mention expensive and time consuming, to test for disease-causing organisms. Since pathogens are primarily transmitted through feces and urine, water which shows the presence of such contaminants is considered unfit for human consumption. Coliform bacteria is excreted in much larger numbers than pathogens. Therefore, Coliform bacteria, specifically the presence of fecal Coliform and Escherichia Coli bacteria, are used as the best (and most easily tested for) indicators of pathogenic contaminated water. While the presence of Coliform bacteria does not prove that the water is dangerous, the absence of these bacteria serves as evidence that the water is free of pathogens.

All public water systems in the Virgin Islands are required to have their drinking water supply tested for Coliform bacteria on a monthly basis. Failure to test the water or submit the test results, or failure to meet the maximum contaminant level (MCL) for total Coliform are all violations of the Total Coliform Rule under the Safe Drinking Water Act.

Compliance with the TCR MCL is determined simply by the presence or absence of total Coliform bacteria in a sample. A public water system which collects fewer than 40 samples per month exceeds this MCL when more than one sample is total coliform-positive. On the other hand, a system which collects more than 40 samples each month exceeds the total coliform MCL if more than 5% of the samples collected are total coliform-positive. Most of the water systems in the Virgin Islands are only required to collect one sample each month. WAPA, since it serves a much larger population, is required to take 30 bacteriological samples on St. Thomas and 40 bacteriological samples on St. Croix each month.

If a sample tests positive for total coliform, the lab will further analyze the water sample for fecal Coliform. If the water sample only tests positive for total coliform, it is considered a non-acute MCL violation. If the water sample also tests positive for fecal coliform, it is considered an acute MCL violation. The reason for differentiating between acute and non-acute MCL violations is the impending health effects that may be caused to an individual by the presence of fecal Coliform in the water. The difference in enforcement of these two types of violations is the time frame in which the PWS must notify users of the water supply of the MCL violation.

There were 64 violations of the Total Coliform MCL in 2002. Of approximately 350 PWSs in the Virgin Islands. Fifty-one (51) systems were responsible for these violations. This represented approximately 18.3% of the Territory's PWSs. The number of total coliform MCL violations decreased by approximately 15.8% from 2001 to 2002.

Each year a small percentage of PWS violate the MCL for Total Coliform. This percentage is possibly kept low as a result of continued technical assistance and educational outreach by the PWSS program. Each year the PWSS program conducts inspections of public water systems, called sanitary surveys. Sanitary surveys are on-site inspections of the water source, facilities, equipment, operation and maintenance procedures, and management practices of a public water system for the purpose of evaluating the adequacy of the system for producing and distributing safe drinking water. Sanitary surveys provide the opportunity for discussion of the importance of providing safe drinking water to the public. It also provides an opportunity to educate public water system operators on proper chlorination and other disinfection techniques. Recommendations on improvements to the facility which will result in the production of better water quality are provided to the PWS by the inspectors. This open dialogue between public water system operators and managers, and DPNR has directly benefitted the public and their health through improved water quality.

3.2 Total Coliform Rule - Monitoring/Reporting Violations

A PWS is required to monitor for total Coliform bacteria on a monthly basis. The number of samples required each month depends on the population served by the PWS. A monitoring violation occurs when the PWS fails to have its water tested or fails to collect the required number of routine and/or repeat samples as mandated by the Virgin Islands Safe Drinking Water Act. A reporting violation occurs when the PWS does not report test results correctly to the primacy agency.

There were 57 monitoring/reporting (M/R) violations of the Total Coliform Rule. Of approximately 350 PWSs in the Virgin Islands, thirty-six (36) PWSs were responsible for all of these violations. This represents approximately 10% of the Territory's PWSs. Nine monitoring violations occurred as a result of eight of these PWSs failure to collect the required repeat samples after a positive routine sample. M/R violations of the Total Coliform Rule, cited during 2002 decreased by approximately 17% from the number of 2001 M/R violations. This decrease in TCR M/R violations may, again, be attributed to a more aggressive outreach policy by the PWSS program.

3.3 Nitrate Monitoring

Nitrate is used in fertilizer and is found in sewage and waste from human and/or farm animals and generally gets into drinking water from those activities. Excessive levels of nitrate in drinking water has caused serious illness and sometimes death in infants under six months of age. The MCL for

Nitrate is 10 mg/l. Exceeding this concentration constitutes a violation of the MCL for Nitrate. No PWS exceeded the MCL for Nitrate in 2002.

PWSs are required to monitor for Nitrate on a annual basis. Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. A monitoring violation also occurs when the PWS does not report analytical samples results to the primacy agency. Thirty-four (34) public water systems failed to monitor for Nitrate in 2002. This represents approximately 9.7% of the Territory's PWSs and a 52% decrease in the number of violations issued for failing to monitor for Nitrate during 2001.

3.4 VOLATILE ORGANIC CONTAMINANTS (VOC) MONITORING

VOCs are chemicals derived from petroleum and refined petroleum products that produce vapors readily at room temperature and normal atmospheric pressure. Volatile organic chemicals include gasoline, industrial chemicals and solvents. Volatile industrial solvents have many uses because of their ability to dissolve oils, fats, resins, rubber and plastic. Only community public water systems and non-transient, non-community public water systems are required to monitor for VOCs. Initially monitor for this group of contaminants occur on a quarterly basis for one year. Subsequent monitoring must occur annually, unless a PWS is granted a waiver by DPNR. Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. A monitoring violation also occurs when the PWS does not report analytical samples results to the DPNR. There were no M/R violations for VOCs in 2002.

There are different MCLs for the twenty-one regulated VOCs. Exceeding any of these established limits constitutes a violation of the MCLs for VOCs. No PWS exceeded any of the MCLs for VOCs in 2002.

3.5 DISINFECTANT AND DISINFECTION BY-PRODUCTS (D/DBP) MONITORING

Many PWSs treat their water with a chemical disinfectant in order to inactivate disease causing pathogens. Chlorine is a commonly used disinfectant for the effective control of many harmful microorganisms. Chlorine, however, reacts with organic matter and form the group of contaminants known as the trihalomethanes. CPWSs which serve a population of 10,000 or more and which add a disinfectant are required to monitor for Total Trihalomethanes (TTHM) on a quarterly basis. Compliance is based on a running annual arithmetic average, computed quarterly, of quarterly averages of all samples collected . Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. A monitoring violation also occurs when the PWS does not report analytical samples results to the DPNR. There were no M/R violations for TTHM in 2002.

The MCL for TTHM is 0.10 mg/l. Exceeding this concentration constitutes a violation of the MCL

for TTHM. No PWS exceeded the MCL for TTHM in 2002.

3.6 SYNTHETIC ORGANIC CONTAMINANTS (SOC) MONITORING

Synthetic Organic Contaminants, as the name implies, are man made compounds. The are found in herbicides, pesticides, PCB transformers, flame retardants and sealants for roofs, cisterns and water storage tanks. In the U.S. Virgin Islands, CPWS are the only type of PWS required to monitor for SOCs. Initially monitor for this group of contaminants occur on a quarterly basis for one year. Subsequent monitoring must occur annually, unless a PWS is granted a waiver by DPNR. Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. A monitoring violation also occurs when the PWS does not report analytical samples results to the DPNR. There were no M/R violations for VOCs.

There are different MCLs for the twenty-one regulated VOCs. Exceeding any of these established limits constitutes a violation of the MCLs for VOCs. There were no MCL violations for VOCs.

3.7 INORGANIC CONTAMINANTS (IOC) MONITORING

Inorganic contaminants include the regulated metals, such as barium, cadmium, cyanide, lead , copper, mercury and nickel, and asbestos, nitrate and nitrite. Contaminant sources of the regulated metals are mineral deposits and industrial activities such as metal finishing, painting, steel processing and the manufacturing of fertilizer products and glass. Asbestos enters drinking water from natural deposits or from asbestos cement pipes that are used for carrying water. Nitrate and Nitrite enter drinking water from natural deposits or from agricultural activity and sewage. Only community public water systems and non-transient, non-community public water systems are required to monitor for IOCs. Initially monitor for this group of contaminants occur on a annual basis. Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. A monitoring violation also occurs when the PWS does not report analytical samples results to the DPNR. Monitoring violations for Nitrate is discussed in section 3.3. There were no M/R violations for the other IOCs in 2002

There are different MCLs for the IOCs. Exceeding any of these established limits constitutes a violation of the MCLs for IOCs. There were no MCL violations for IOCs in 2002.

3.8 LEAD AND COPPER MONITORING

Community and Non-Transient, Non-Community, Public Water Systems are required to initially monitor for Lead and Copper during two consecutive 6-month sampling periods. The number of samples required to be collected during each sampling period is based on the population served by a PWSs. Failure to perform this monitoring as required by the Virgin Islands Safe Drinking Water Act, constitutes a monitoring violation. There are no MCLs for lead and copper. EPA has, however, established Action Levels (AL) for lead and copper. Exceeding an AL is not a violation of the Safe Drinking Water Act. PWSs exceeding the ALs for lead and copper are required to install optimal corrosion control treatment. Failure to install treatment or recommend a corrosion control treatment to the primacy agency constitutes a treatment technique violation of the Safe Drinking Water Act.

3.9 SIGNIFICANT NONCOMPLIANCE (SNC)

Significant noncompliance occurs when a public water system violates any water quality monitoring requirement for three (3) or more consecutive months (i.e Total Coliform monitoring) or two (2) or more compliance periods (i.e. chemical parameter monitoring requirements). Significant noncompliance is considered the most reprehensible and significant violation under the SDWA.

List of Significant Noncompliers

No.	Public Water System	EPA ID #	Type	Contaminant(s)	Island
1	Caribbean View Apartments	VI0000313	TNC	Coliform	St. Croix
2	Villa La Reine Shopping Center	VI0000413	NTNC	Coliform Nitrate	St. Croix
3	Black Beards Castle Hotel	VI1000009	TNC	Coliform	St. Thomas
4	Cost-U-Less		NTNC	Nitrate	St. Thomas
5	Curriculum Center (Laga)	VI0000274	NTNC	Nitrate	St. Thomas
6	Evelyn E. Marcelli School	VI0000522	NTNC	Nitrate	St. Thomas
7	Frenchtown Ballfield (HP&R)	VI1000200	TNC	Nitrate	St. Thomas
8	Guy Benjamin Elem.-STJ	VI0000555	NTNC	Nitrate	St. Thomas
9	Hospital Ground Bldg. A (HP&R)	VI0000112	C	Nitrate	St. Thomas
10	Hospital Ground Bldg. F (HP&R)	VI0000113	C	Nitrate	St. Thomas
11	Hospital Ground Bldg. G (HP&R)	VI0000114	C	Nitrate	St. Thomas
12	James Monroe School	VI0000524	NTNC	Coliform Nitrate	St. Thomas
13	Joseph Sibilly Elem. (Art Room)	VI0000508	NTNC	Nitrate	St. Thomas
14	Joseph Sibilly Elem. (Cafe)	VI0000507	NTNC	Nitrate	St. Thomas

No.	Public Water System	EPA ID #	Type	Contaminant(s)	Island
15	Knud Hansen Complex	VI0000124	NTNC	Coliform	St. Thomas
16	Lionel Roberts Stadium	VI1000152	TNC	Nitrate	St. Thomas
16	Lulu's Restaurant	VI0000293	TNCPWS	Coliform Nitrate	St. Thomas
17	Magen's Bay Concession	VI0000223	TNC	Coliform	St. Thomas
18	Peace Corp Elem. (Kitchen)	VI0000267	NTNC	Nitrate	St. Thomas
19	Professional Center	VI1000085	NTNC	Nitrate	St. Thomas
20	Queen Louise Apt. I (HP&R)	VI1000018	C	Nitrate	St. Thomas
21	Queen Louise Apt. II (HP&R)	VI1000019	C	Nitrate	St. Thomas
22	Taarneberg Ross Bldg. 1 (HP&R)	VI0000471	C	Nitrate	St. Thomas
23	Taarneberg Ross Bldg. 2 (HP&R)	VI0000472	C	Nitrate	St. Thomas
24	Taarneberg Ross Bldg. 3 (HP&R)	VI0000129	C	Nitrate	St. Thomas
25	Taarneberg Ross Bldg. 4 (HP&R)	VI0000130	C	Nitrate	St. Thomas
26	Wheatley Shopping Center II	VI0000296	NTNC	Coliform	St. Thomas
27	Winston Raymos Ctr. (HP&R)	VI0000505	TNC	Nitrate	St. Thomas

C = Community public water system
NTNC = Non-transient,Non-Community public water system
TNC = Transient,Non-Community public water system

4.0 List of Public Water Systems with Violations During 2002

4.1 St. Croix Public Water Systems with Violations during 2002

PWS No.	PWS - St. Croix	EPAID No.	Class.	Av. Daily Pop.	Contaminant	Violation No.	NOV #	Violation Type	Acute Violation	Violation Period
1	Cane Brake Apt.	VI0000305	C	304	Coliform	1	C-02-048	MCL	Yes	Sep-02
2	Caribe Do It Center	VI3000244	NTNC	195	Coliform	2	C-02-043	MCL	Yes	Jul-02
3	Carribbean View Apt.	VI0000313	TNC	25	Coliform	3	C-02-027	MCL	No	Mar-02
					Coliform	4	C-02-041	MCL	No	Jul-02
					Coliform	5	C-02-049	MCL-Fine	Yes	Sep-02
4	Chenay Bay	VI3000091	NTNC	25	Coliform	6	C-02-023	MCL	Yes	Feb-02
					Coliform	7	C-02-042	MCL	Yes	Jul-02
5	Galloway's Water Service	VI3000445	TNC	25	Coliform	8	C-03-001	M//R	N/A	Oct-02
6	Good Hope Townhouse	VI0000098	C	142	Coliform	9	C-02-022	MCL-Fine	Yes	Feb-02
7	Herbert Grigg/ Kitchen	VI0000058	C	50	Coliform	10	C-02-024	MCL	Yes	Feb-02
8	Kentucky Fried (F'sted)	VI0000392	TNC	430	Coliform	11	C-02-047	MCL	Yes	Sep-02
					Coliform	12	C-03-004	MCL	Yes	Dec-02
9	Manor School	VI3000044	NTNC	200	Coliform	13	C-02-032	MCL-Fine	Yes	Apr-02
10	Med-Isles I	VI3000075	NTNC	200	Coliform	14	C-02-040	MCL	Yes	Jun-02
11	Profit Head Start	VI0000379	NTNC	35	Coliform	15	C-02-030	MCL	Yes	Apr-02
12	St. Joseph High School	VI0000609	NTNC	185	Coliform	16	C-02-039	MCL	Yes	Jun-02
13	STX Mutual Homes 14/20	VI3000463	C	300	Coliform	17	C-02-036	MCL	No	Jun-02
14	STX Mutual Homes 22/23	VI3000464	C	500	Coliform	18	C-02-031	MCL	No	Apr-02
15	Sunny Isle Shopping Center	VI0000406	NTNC	3200	Coliform	19	C-02-029	MCL	Yes	Apr-02
16	Territorial Court	VI3000012	NTNC	80	Coliform	20	C-02-034	MCL	Yes	May-02
17	The STX Avis	VI3000226	TNC	25	Coliform	21	C-02-021	MCL	Yes	Feb-02
					Coliform	22	C-02-046	MCL-Fine	Yes	Aug-02
18	United Corp. (Stand Pipe)	VI3000500	TNC	25	Coliform	23	C-02-026	MCL	No	Mar-02
19	Villa La Reine Shopping Center	VI0000413	NTNC	1575	Coliform	24	C-02-012	M/R-Fine	N/A	Jan-02
					Coliform	25	C-02-019	M/R-Fine	N/A	Feb-02
					Coliform	26	C-02-028	M/R-Fine	N/A	Mar-02
					Coliform	27	C-02-033	M/R-Fine	N/A	Apr-02
					Coliform	28	C-02-035	M/R-Fine	N/A	May-02
					Coliform	29	C-02-038	M/R-Fine	N/A	Jun-02
					Coliform	30	C-02-044	M/R-Fine	N/A	Jul-02
					Coliform	31	C-03-002	M/R	N/A	Oct-02
					Coliform	32	C-03-003	M/R	N/A	Nov-02
					Nitrate	33	C-03-300	M/R	N/A	2002

4.0 List of Public Water Systems with Violations During 2002

4.2 St. Thomas/St. John Public Water Systems with Violations during 2002

PWS No.	PWS - St. Thomas	EPAID No.	Classification	Av. Daily Pop.	Contaminant	Violation No.	NOV #	Violation Type	Acute Violation	Violation Period
1	Al Cohen's Mall (Pizza Amore)	VI1000160	TNC	220	Coliform	1	T-03-019	M/R	N/A	Dec-02
2	Al Cohen's Plaza B-2 (Randy's)	VI1000161	TNC	106	Coliform	2	T-03-013	M/R	N/A	Nov-02
3	American Yacht Harbor, Inc	VI1000042	NTNC	400	Coliform	3	T-02-039	M/R	N/A	Feb-02
4	Anna's Retreat Center	VI1000198	NTNC	77	Coliform	4	T-03-020	M/R	N/A	Dec-02
					Nitrate	5	T-03-300	M/R	N/A	2002
5	Asolare	VI1000165	TNC	25	Coliform	6	T-02-090	MCL	No	09/30/02
					Nitrate	7	T-03-301	M/R	N/A	2002
6	Barbel Plaza 3 (Dept. of Education)	VI1000190	NTNC	100	Coliform	8	T-02-049	M/R	N/A	Mar-02
7	Black Beards Castle Hotel	VI1000009	TNC	100	Coliform	9	T-02-073	MCL	Yes	06/21/02
					Coliform	10	T-03-014	Repeat	N/A	11/22/02
					Coliform	11	T-03-021	M/R	N/A	Dec-02
8	Bluebeard's Beach Club & Villas - A	VI0000211	NTNC	62	Coliform	12	T-02-091	MCL	Yes	09/03/02
9	Bluebeard's Beach Club & Villas - D	VI0000214	NTNC	62	Coliform	13	T-02-092	MCL	Yes	09/03/02
10	Bluebeard's Beach Club & Villas - G	VI0000217	NTNC	62	Coliform	14	T-02-093	MCL	Yes	09/03/02
11	Bolongo Hotel (West) #13	VI0000169	TNC	225	Coliform	15	T-03-005	MCL	Yes	10/08/02
12	Bunker Hill Guest House	VI1000108	TNC	35	Coliform	16	T-02-087	M/R	N/A	Jul-02
13	Cabrita Point Resort	VI1000131	C	105	Coliform	17	T-02-032	MCL/Fine	No	01/11/02
					Coliform	18	T-02-037	MCL/Fine	Yes	02/08/02
14	Chateau Bordeaux	VI1000164	TNC	50	Coliform	19	T-03-006	Repeat	N/A	10/21/02
15	Cost-U-Less	VI1000301	NTNC	800	Nitrate	20	T-03-302	M/R	N/A	2002
16	Cruz Bay Headstart-DHS	VI0000562	NTNC	30	Coliform	21	T-03-022	M/R	N/A	Dec-02
17	Cruz Inn/St. John Inn I	VI1000091	TNC	25	Coliform	22	T-02-064	MCL	Yes	05/17/02
18	Curriculum Ctr. (Laga)	VI0000274	NTNC	150	Nitrate	23	T-03-303	M/R	N/A	2002
19	Dorothea Condo Assoc.	VI1000072	C	68	Coliform	24	T-02-040	M/R	N/A	Feb-02
20	East Winds Condos	VI0000590	TNC	30	Coliform	25	T-02-041	M/R	N/A	Feb-02
		VI0000590	TNC		Coliform	26	T-03-023	MCL	No	12/11/02
21	Edith L. Williams School	VI0000200	NTNC	160	Coliform	27	T-02-094	MCL	Yes	09/05/02
22	Elysian Beach Resort	VI1000080	NTNC	300	Coliform	28	T-03-015	MCL	Yes	11/15/02
23	Estate Harmony #1	VI1000181	TNC	130	Nitrate	29	T-03-304	M/R	N/A	2002
24	Estate Harmony #2	VI1000182	TNC	130	Coliform	30	T-02-045	MCL	Yes	03/26/02
					Coliform	31	T-03-007	Repeat	N/A	10/29/02
					Nitrate	32	T-03-305	M/R	N/A	2002
25	Evelyn E. Marcelli School	VI0000522	NTNC	235	Nitrate	33	T-03-306	M/R	N/A	2002
26	Fort Mylner Headstart-DHS	VI1000126	NTNC	25	Coliform	34	T-02-038	MCL	Yes	02/12/02

4.0 List of Public Water Systems with Violations During 2002

4.2 St. Thomas/St. John Public Water Systems with Violations during 2002

PWS No.	PWS - St. Thomas	EPAID No.	Classification	Av. Daily Pop.	Contaminant	Violation No.	NOV #	Violation Type	Acute Violation	Violation Period
27	Frenchtown Ballfield (H,P, & R)	VI1000200	TNC	200	Coliform	35	T-02-042	M/R	N/A	Feb-02
					Coliform	36	T-03-024	Repeat	N/A	12/23/02
					Nitrate	37	T-03-307	M/R	N/A	2002
28	Guy Benjamin Elementary-STJ	VI0000555	NTNC	135	Nitrate	38	T-03-308	M/R	N/A	2002
29	Heritage Hills Condos	VI1000118	C	150	Coliform	39	T-02-035	M/R	N/A	Jan-02
30	Hometown Convenience	VI1000201	TNC	100	Coliform	40	T-02-050	M/R-Fine	N/A	Mar-02
31	Hospital Grnd. Proj. Bldg A (H, P, & R)	VI0000112	C	25	Coliform	41	T-02-078	MCL	Yes	08/02/02
					Coliform	42	T-03-025	Repeat	N/A	12/23/02
					Nitrate	43	T-03-309	M/R	N/A	2002
32	Hospital Grnd. Proj. Bldg F (H, P, & R)	VI0000113	C	25	Coliform	44	T-02-057	MCL	Yes	04/17/02
					Coliform	45	T-02-079	MCL	Yes	08/02/02
					Nitrate	46	T-03-310	M/R	N/A	2002
33	Hospital Grnd. Proj. Bldg G (H, P, & R)	VI0000114	C	25	Nitrate	47	T-03-311	M/R	N/A	2002
34	Hull Bay Hideaway	VI0000219	TNC	200	Coliform	48	T-02-080	MCL	No	07/24/02
35	Ivanna Eudora Kean High	VI0000250	NTNC	1105	Coliform	49	T-02-095	MCL-Fine	Yes	09/05/02
					Nitrate	50	T-03-312	M/R	N/A	2002
36	James Monroe (Sibilly)	VI0000524	NTNC	50	Coliform	51	T-02-056	M/R	N/A	Mar-02
					Coliform	52	T-02-061	M/R	N/A	Apr-02
					Coliform	53	T-02-070	M/R-Fine	N/A	May-02
					Nitrate	54	T-03-313	M/R	N/A	2002
37	Joseph Sibilly Elem.(ArtRm)	VI0000508	NTNC	30	Coliform	55	T-02-062	M/R	N/A	Apr-02
					Nitrate	56	T-03-314	M/R	N/A	2002
38	Joseph Sibilly Elem (cafe)	VI0000507	NTNC	95	Coliform	57	T-02-063	M/R	N/A	Apr-02
					Nitrate	58	T-03-315	M/R	N/A	2002
39	Knud Hansen Complex-DHS	VI0000124	NTNC	50	Coliform	59	T-02-033	MCL/Fine	Yes	01/22/02
					Coliform	60	T-02-046	MCL/Fine	Yes	03/13/02
					Coliform	61	T-02-065	MCL-Fine	Yes	05/07/02
					Coliform	62	T-02-074	MCL-Fine	Yes	06/12/02
					Coliform	63	T-02-088	M/R-Fine	N/A	Jul-02
					Coliform	64	T-03-016	Repeat	N/A	11/20/02
					Coliform	65	T-03-026	Repeat	N/A	12/17/02
40	Lionel Roberts Stadium (H, P, & R)	VI1000152	TNC	25	Nitrate	66	T-03-316	M/R	N/A	2002

4.0 List of Public Water Systems with Violations During 2002

4.2 St. Thomas/St. John Public Water Systems with Violations during 2002

PWS No.	PWS - St. Thomas	EPAID No.	Classification	Av. Daily Pop.	Contaminant	Violation No.	NOV #	Violation Type	Acute Violation	Violation Period
41	Lulu's	VI0000293	TNC	25	Coliform	67	T-02-043	M/R	N/A	Feb-02
					Coliform	68	T-02-051	M/R	N/A	Mar-02
					Coliform	69	T-02-060	M/R-Fine	N/A	Apr-02
					Coliform	70	T-03-017	Repeat	N/A	Nov-02
					Nitrate	71	T-03-317	M/R	N/A	2002
42	Magen's Bay Concession	VI0000223	TNC	300	Coliform	72	T-02-058	MCL/Fine	Yes	04/17/02
					Coliform	73	T-02-066	MCL-Fine	Yes	05/21/02
					Coliform	74	T-02-075	MCL-Fine	Yes	06/14/02
					Coliform	75	T-02-096	M/R-Fine	N/A	Sep-02
43	Magen's Point Resort	VI1000198	TNC	60	Coliform	76	T-03-027	MCL	Yes	12/13/02
44	Mahogony Run (Standpipe)	VI1000203	TNC	25	Nitrate	77	T-03-318	M/R	N/A	2002
45	Mitchell Guest House	VI0000224	C	45	Coliform	78	T-02-044	M/R	N/A	Feb-02
46	Mountain Top	VI1000146	TNC	325	Coliform	79	T-02-077	M/R	N/A	Jun-02
					Coliform	80	T-02-081	MCL	No	07/24/02
47	Nisky Center	VI1000037	NTNC	550	Coliform	81	T-02-052	M/R	N/A	Mar-02
					Coliform	82	T-03-008	M/R	N/A	Oct-02
48	Old Stone Farmhouse	VI1000149	TNC	100	Coliform	83	T-02-071	M/R	N/A	May-02
49	Paradise Point Bar & Rest.	VI1000147	TNC	250	Coliform	84	T-03-009	M/R	N/A	Oct-02
50	Peace Corp Elem. (kitchen)	VI0000267	NTNC	400	Nitrate	85	T-03-319	M/R	N/A	2002
51	Professional Center	VI1000085	NTNC	50	Coliform	86	T-02-034	MCL	Yes	01/23/02
					Nitrate	87	T-03-320	M/R	N/A	2002
52	Pueblo Market (Subbase)	VI1000101	NTNC	200	Nitrate	88	T-03-321	M/R	N/A	2002
53	Queen Louise Apt. I (H, P, & R)	VI1000018	C	30	Coliform	89	T-02-076	MCL	No	06/19/02
					Nitrate	90	T-03-322	M/R	N/A	2002
54	Queen Louise Apt. II (H, P, & R)	VI1000019	C	25	Nitrate	91	T-03-323	M/R	N/A	2002
55	Queen Louise Home (DHS)	VI0000128	C	60	Coliform	92	T-02-053	M/R	N/A	Mar-02
56	R. Wheatley Skills Center	VI1000069	NTNC	50	Nitrate	93	T-03-324	M/R	N/A	2002
57	Red Hook Shopping Center	VI1000050	TNC	220	Coliform	94	T-03-010	MCL	Yes	10/08/02
58	Romano's Restaurant	VI1000148	TNC	25	Coliform	95	T-02-097	M/R	N/A	Sep-02
					Coliform	96	T-03-011	M/R	N/A	Oct-02
					Nitrate	97	T-03-325	M/R	N/A	2002

4.0 List of Public Water Systems with Violations During 2002

4.2 St. Thomas/St. John Public Water Systems with Violations during 2002

PWS No.	PWS - St. Thomas	EPAID No.	Classification	Av. Daily Pop.	Contaminant	Violation No.	NOV #	Violation Type	Acute Violation	Violation Period
59	Sapphire Beach Resort	VI1000029	NTNC	400	Coliform	98	T-02-036	M/R	N/A	Jan-02
					Coliform	99	T-02-072	M/R	N/A	May-02
60	Secret Harbor Beach Resort	VI0000535	NTNC	180	Coliform	100	T-03-028	M/R	N/A	Dec-02
61	Sibs Mountain Top Bar	VI1000040	TNC	175	Coliform	101	T-02-082	MCL	Yes	07/24/02
					Coliform	102	T-03-029	MCL	Yes	12/13/02
62	St. Thomas Catering	VI1000116	TNC	139	Coliform	103	T-02-083	MCL	No	07/30/02
63	St. Thomas Dairies	VI1000292	NTNC	60	Nitrate	104	T-03-326	M/R	N/A	2002
64	Sugar Bay Plantation	VI1000104	NTNC	800	Coliform	105	T-02-059	MCL	Yes	04/05/02
65	Sugar Estate Headstart-DHS	VI1000123	NTNC	116	Coliform	106	T-02-067	MCL	Yes	05/07/02
66	Taarneberg Ross Bldg. 1 (H, P, & R)	VI0000471	C	100	Nitrate	107	T-03-327	M/R	N/A	2002
67	Taarneberg Ross Bldg. 2 (H, P, & R)	VI0000472	C	100	Nitrate	108	T-03-328	M/R	N/A	2002
68	Taarneberg Ross Bldg. 3 (H, P, & R)	VI0000129	C	100	Nitrate	109	T-03-329	M/R	N/A	2002
69	Taarneberg Ross Bldg. 4 (H, P, & R)	VI0000130	C	100	Nitrate	110	T-03-330	M/R	N/A	2002
70	Tillet Gardens	VI0000093	TNC	70	Coliform	111	T-02-047	MCL	Yes	03/15/02
71	VI Port Authority (airport)	VI0000264	NTNC	2900	Coliform	112	T-02-084	MCL	Yes	07/30/02
72	Virgin Beverages, Inc. (Standpipe)	VI1000212	TNC	25	Coliform	113	T-02-069	MCL	Yes	05/07/02
					Coliform	114	T-02-089	M/R	N/A	Aug-02
					Nitrate	115	T-03-331	M/R	N/A	2002
73	Vitelco (Warehouse)	VI1000283	NTNC	25	Coliform	116	T-03-018	MCL	Yes	11/15/02
74	Wharfside Village	VI1000291	NTNC	350	Coliform	117	T-02-085	MCL	Yes	07/24/02
75	Wheatley Shopping I	VI0000275	NTNC	575	Coliform	118	T-02-054	M/R	N/A	Mar-02
76	Wheatley Shopping II	VI0000296	NTNC	60	Coliform	119	T-02-055	M/R	N/A	Mar-02
					Coliform	120	T-02-086	MCL	Yes	07/30/02
					Coliform	121	T-03-012	Repeat	N/A	10/16/02
77	Winston Raymos Ctr. (H, P, & R)	VI0000505	TNC	200	Nitrate	122	T-03-332	M/R	N/A	2002

APPENDIX A: DEFINITIONS

Inorganic Contaminants: Non-carbon-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

Lead and Copper Rule: This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household pipes and plumbing fixtures. States report violations of the Lead and Copper Rule in the following six categories:

Maximum Contaminant Level (MCL): The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. MCLs are defined in milligrams per liter (parts per million) unless otherwise specified.

Monitoring: EPA specifies which water testing methods the water systems must use, and sets schedules for the frequency of testing. A water system that does not follow EPA's schedule or methodology is in violation [40 CFR 141].

States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the States. For purposes of this report, significant monitoring violations are major violations and they occur when no samples are taken or no results are reported during a compliance period. A major monitoring violation for the surface water treatment rule occurs when at least 90% of the required samples are not taken or results are not reported during the compliance period.

Organic Contaminants: Carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from crop land or discharge from factories. EPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

Radionuclides: Radioactive particles which can occur naturally in water or result from human activity. EPA has set legal limits on four types of Radionuclides: radium-226, radium-228, gross alpha, and beta particle/photon radioactivity [40 CFR 141].

Total Coliform Rule (TCR): The Total Coliform Rule establishes regulations for microbiological contaminants in drinking water. These contaminants can cause short-term health problems. If no samples are collected during the one month compliance period, a significant monitoring violation occurs.

Acute MCL violation: Indicates that the system found fecal coliform or E. coli, potentially harmful bacteria, in its water, thereby violating the rule.

Non-acute MCL violation: Indicates that the system found total coliform in samples of its water at a frequency or at a level that violates the rule. For systems collecting fewer than 40 samples per month, more than one positive sample for total coliform is a violation. For systems collecting 40 or more samples per month, more than 5% of the samples positive for total coliform is a violation.

Major routine and follow-up monitoring violation: Indicates that a system did not perform any monitoring.

Treatment Techniques: A water disinfection process that EPA requires instead of an MCL for contaminants that laboratories cannot adequately measure. Failure to meet other operational and system requirements under the Surface Water Treatment and the Lead and Copper Rules have also been included in this category of violation for purposes of this report.

Violation: A failure to meet any state or federal drinking water regulation.