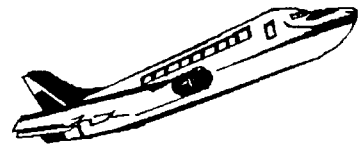
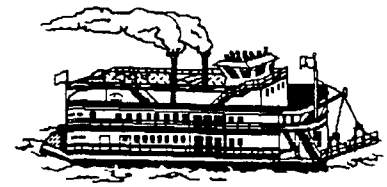
AIRCRAFT



VESSELS



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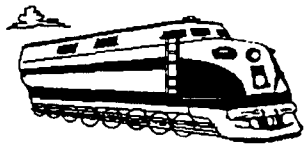
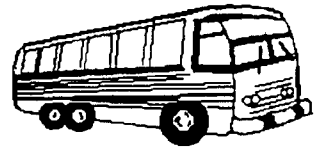


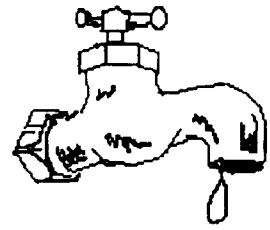
BUSES



INTERSTATE CARRIER CONVEYANCE PROGRAM

Under the Safe Drinking Water Act

"THE ROLE OF INTERSTATE CARRIER CONVEYANCES"



Public Water System Supervision Program
Environmental Protection Agency

EPA-PWSSP-1989

1989

I. INTRODUCTION

The Safe Drinking Water Act (SDWA), amended June 19, 1986, and the National Primary Drinking Water Regulations (NPDWR) (40 CFR Sec. 141) require that interstate carrier conveyances (ICCs) (aircraft, trains, buses, and vessels), providing on-board drinking water, meet the requirements of the NPDWR as a non-community public water system (PWS). The Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) have the broad responsibility of assuring the quality of drinking water served by ICCs. EPA has developed Water Guidance 56B (WG-56B) to assist ICCs and EPA Regional Offices to implement this program. (Regulations and guidance documents are available at the EPA Regional Offices.)

The NPDWR, established by the SDWA, define a PWS as:

> °A system for the provision to the public of 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. A public water system is either a "community system" or a "non-community water system." (40 CFR Sec. 141.2)

A community water system is a PWS which serves year-round residents. A non-community water system is a PWS whose consumers are mobile or transient in nature (e.g., schools, factories, nursing homes, highway rest stops, interstate carrier conveyances, etc.).

II. INTERSTATE CARRIER CONVEYANCES (ICCs)

An ICC which provides drinking water to its customers is required to do the following:

1. Monitor water quality regularly (total coliform bacteria, each calendar quarter while in operation; turbidity and nitrates (in some instances if required by EPA); or

2. Institute a regular water system operation and maintenance (O&M) program plan (see Section V) covering each conveyance in lieu of the required monitoring. The O&M plan must be approved by EPA.

If an ICC chooses to institute a regular O&M program in lieu of routine monitoring, it is required that the ICC submit, for approval, a detailed explanation of its proposed program to the appropriate EPA Regional Office. (See Exhibit 1, EPA Regional Offices.)

III. ROUTINE MONITORING (40 CFR Sec. 141.21)

ICCs are required to collect samples for laboratory testing of the drinking water for total coliform bacteria each calendar quarter while in operation. Monitoring for turbidity and nitrates will be determined for each ICC by the EPA Regional Office. (These requirements are in addition to any local health agencies' requirements.)

For those ICCs that do not operate year-round, total coliform bacteria testing is performed during the operating season. An example of a required sampling event follows:

ICC Operating Season	Number of Samples Required for an ICC
April- November	Quarter 1 = April-June (1 sample required)
	Quarter 2 = July-September (1 sample required)

All analyses must be performed by a laboratory certified for analysis of public drinking water, and the results submitted to EPA within 40 days following the test. The ICC must report to EPA within 48 hours a violation of the NPWDR (including failure to comply with monitoring requirements). Section IV of this brochure explains the procedures to be followed when violations of the NPWDR occur.

The coliform regulations will be revised in the summer of 1989; however, there will still be a minimum sampling requirement.

IV. VIOLATIONS AND PUBLIC NOTIFICATION

All PWSs must comply with the NPDWR. These regulations require PWSs to monitor the quality of their water and to report results to the state or EPA Regional Office. (EPA is the regulatory agency for ICCs.)

Because of the transitory nature of the consumer's exposure to health risks from drinking water served by ICCs, only the regulation requirements associated with MCLs for those contaminants which pose an acute health threat (based on short-term consumption) to passengers and/or crew members on board ICCs are applicable to the drinking water served by ICCs. These include coliform bacteria, turbidity, and nitrate.

Maximum Contaminant Level (MCL) Violations

EPA has set MCLs, meaning the maximum permissible level of a contaminant in water, for coliform bacteria, turbidity, and nitrate. For example, if a laboratory determines that coliform bacteria are present in a sample, an ICC may be required to collect additional samples to confirm contamination, and may be advised to follow these procedures:

(1) notify the appropriate EPA Regional Office within 48 hours of the laboratory result;

(2) flush out and disinfect the sampling point in violation;

(3) notify the users (crew and passengers) by hand-delivered flyers or posted notice for the duration of the violation. (See Exhibit 2 for MCL and reporting requirements.)

Monitoring and Reporting Violations

Failure to do the required testing or reporting is a violation of the regulations that must be reported to EPA within 48 hours. Public notification may also be necessary.

Public Notification

Public notification is the process of notifying users of violations of the regulations. A posted notice is considered effective where users are transient and would probably not be aware of previous notices in the newspapers or broadcasts. (See Exhibit 3 for an example of a posted public notice.)

V. O&M PROGRAM PLANS

An ICC has the option of instituting an O&M program in lieu of required monitoring. This option cannot be used if the conveyance:

1. Takes raw water on board and treats it for potable use; or

2. provides additional treatment of water from an approved watering point. Additional chlorination or the use of activated carbon filtration applied to water does not constitute additional treatment.

If an ICC chooses to institute a regular O&M program, it is required that the ICC submit for approval a detailed explanation of its proposed program to an EPA regional office. (See Exhibit 1.)

An O&M program plan must include a log for each conveyance. The log must accurately record the maintenance procedures used, when maintenance was accomplished, and the name of the employee performing the maintenance. At the end of each calendar year, a summary report must be submitted to EPA for each conveyance indicating the maintenance procedures used and the frequency. (Exhibit 4 shows the format of a maintenance log.)

EPA will evaluate the effectiveness of the O&M program, using the guidance in WG-56B. (Exhibit 5 shows the approval criteria.)

Initially, O&M program plans are approved for a one-year period. EPA has the option to extend the approval periods.

VI. WAIVERS AND PLACARDING

ICCs which clearly do not provide water for human consumption may receive a waiver from coverage under the NPDWR. ICCs which desire a waiver must provide a written request to EPA. As a part of the request, they must certify that each water tap has been removed or is placarded to indicate that the water is not to be used for drinking. (Exhibit 5 shows the format of a placard.)

VII. EPA'S ROLE

EPA and the FDA are responsible for assuring the quality of drinking water on board ICCs. The EPA Regional Office also has the responsibility for:

1. Maintaining an inventory of all ICCs headquartered in the states in its region.

2. Ensuring that ICCs are aware of their obligation to provide safe drinking water under the SDWA and are aware of the required monitoring or O&M procedures;

3. Ensuring that each ICC complies with the monitoring and reporting requirements for each conveyance;

4. Evaluating and, where appropriate, approving O&M plans for each carrier that elects to institute O&M procedures in lieu of monitoring (minimum criteria for ICC O&M plans are provided in Exhibit 5); and

5. Performing random and routine checks of water quality and maintenance records.

A list of EPA Regional Drinking Water Offices is provided as Exhibit 1. These Regional Offices should be contacted if you have questions or wish a copy of WG-56B.

A questionnaire is attached to this brochure as Exhibit 7 and should be completed by ICCs and submitted to the appropriate EPA regional office.

EPA REGIONS 1 - 10

Drinking Water Offices

EPA, Region 1
Water Supply Branch
John F. Kennedy
Federal Building
Boston, MA 02203
(617) 565-3610

EPA, Region 2
Drinking/Groundwater
Protection Branch
26 Federal Plaza
New York, NY 10278
(212) 264-1800

EPA, Region 3
Drinking/Groundwater
Protection Branch
841 Chestnut Street
Philadelphia, PA 19107
(215) 597-8227

EPA, Region 4
Office of Drinking Water
345 Courtland Street, NE
Atlanta, GA 30365
(404) 347-2913

EPA, Region 5
Safe Drinking Water Branch
230 South Dearborn Street
Chicago, IL 60604
(312) 353-2650

EPA, Region 6
Water Supply Branch
1445 Ross Avenue
12th Floor, Suite 1200
Dallas TX 75270
(214) 655-7150

EPA, Region 7
Drinking Water Branch
726 Minnesota Avenue
Kansas City, KS 66101
(913) 236-2815

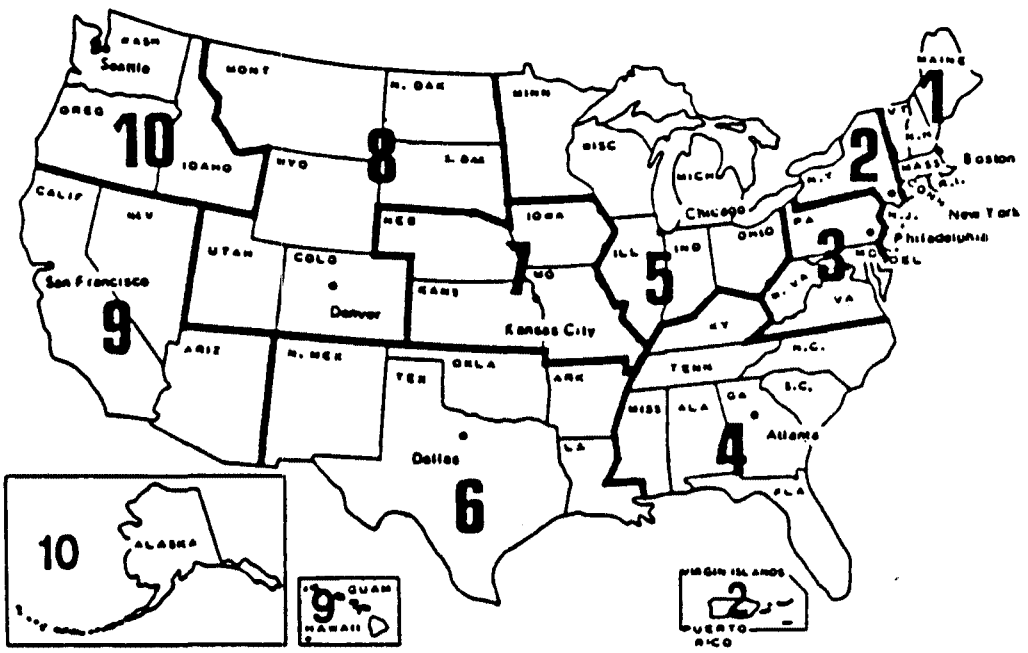
EPA, Region 8
Drinking Water Branch
999 18th Street, Suite 500
Denver, CO 80202
(303) 293-1407

EPA, Region 9
Drinking Water Branch
215 Fremont Street
San Francisco, CA 94105
(415) 974-0912

EPA, Region 10
Drinking Water Branch
1200 Sixth Avenue
Seattle, WA 98101
(206) 442-4092

NOTE: The state in which an ICC's company/corporate headquarters is located determines the EPA Regional Office regulating that particular ICC. Select your EPA Regional Office from the list on the next page.

EPA
Regional Offices



Regions	Regions	Regions
4 — Alabama	1 — Maine	3 — Pennsylvania
10 — Alaska	3 — Maryland	1 — Rhode Island
9 — Arizona	1 — Massachusetts	4 — South Carolina
6 — Arkansas	5 — Michigan	8 — South Dakota
9 — California	5 — Minnesota	4 — Tennessee
8 — Colorado	4 — Mississippi	6 — Texas
1 — Connecticut	7 — Missouri	8 — Utah
3 — Delaware	8 — Montana	1 — Vermont
3 — D.C.	7 — Nebraska	3 — Virginia
4 — Florida	9 — Nevada	10 — Washington
4 — Georgia	1 — New Hampshire	3 — West Virginia
9 — Hawaii	2 — New Jersey	5 — Wisconsin
10 — Idaho	6 — New Mexico	8 — Wyoming
5 — Illinois	2 — New York	9 — American Samoa
5 — Indiana	4 — North Carolina	9 — Guam
7 — Iowa	8 — North Dakota	2 — Puerto Rico
7 — Kansas	5 — Ohio	2 — Virgin Islands
4 — Kentucky	6 — Oklahoma	
6 — Louisiana	10 — Oregon	

ICCs - MCL & REPORTING REQUIREMENTS

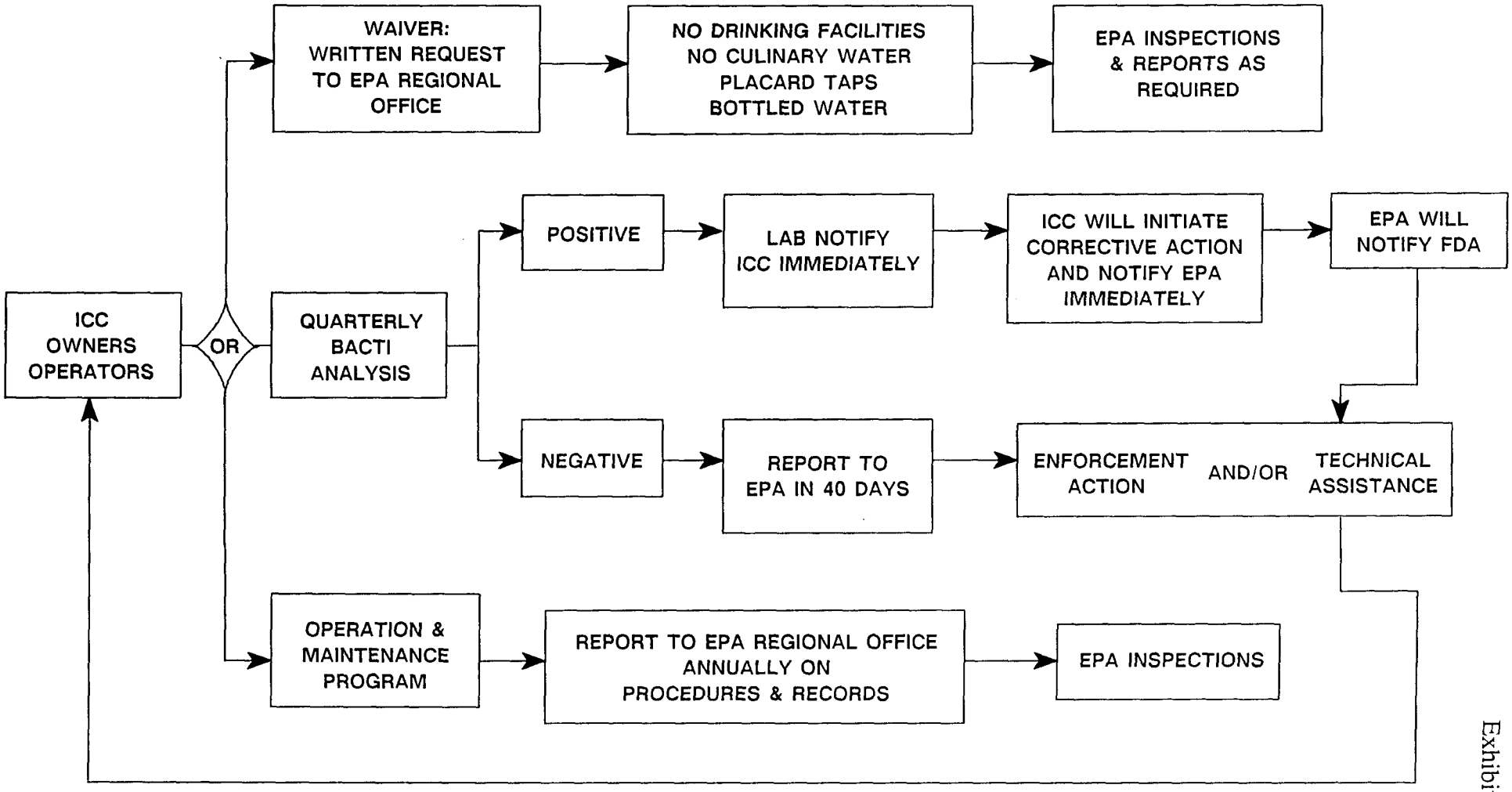


Exhibit 2

EXAMPLE **Posted Notice with Recommended Health Effects Language**

June 1, 1989

Amber Way Turnpike Authority

TURNPIKE WATER SYSTEM ENCOUNTERS DELAY IN LOWERING NITRATE LEVELS

WATER FROM THIS LOCATION SHOULD NOT BE GIVEN TO INFANTS UNDER 6 MONTHS OF AGE.

SITUATION

The Amber Way Turnpike Authority has announced a delay in installation of water treatment equipment for this rest stop. As a result:

Water available at this rest stop may be slightly higher in nitrates than recommended and should not be given to infants under 6 months of age, or used in making baby formula.

HEALTH INFORMATION

The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. This inorganic chemical is used in fertilizer, and is associated with sewage and wastes from farm animals. It generally gets into water from sewage or as a result of the application of fertilizer onto farmland.

Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in young children under 6 months of age. Infants are at the greatest risk. The serious illness in children is caused because nitrate is converted to nitrite in the body and nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease because the child can exhibit symptoms within hours of consuming water. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. However, they do not always occur. The purpose of this notice is to encourage parents and other responsible parties to provide children with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. You will be notified as soon as a determination has been made that the drinking water is safe.

EPA has set the drinking water standard at 10 parts per million (ppm) for nitrate to protect against the risk of these adverse effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to nitrate.

See second page of this notice for additional information.

EXAMPLE **Posted Notice with Recommended Health Effects Language** (continued)

Page 2 of posted notice.

Amber Way Turnpike Authority

GENERAL INFORMATION

Water measured at this rest stop contained 12 milligrams of nitrate per liter of water. That is slightly higher than the nitrate limit of 10 milligrams per liter, established by the State Health Department. The Turnpike Authority has ordered special water treatment equipment that is designed to lower nitrate levels, and was scheduled to have the equipment installed by June 1989. The Turnpike Authority was granted an exemption by the State Health Department to meet that deadline. However, because of installation delays, the equipment will not be installed until August. An application has been made to the State Health Department to approve that schedule.

Water at this rest slop is safe for most adults and all children over 6 months of age. In children under 6 months, high nitrate levels can cause methemoglobrinemia, or "blue baby" syndrome.

Because consumption of water high in nitrates for even a day may lead to serious cases of methemoglobinemia, DO NOT GIVE WATER FROM THIS REST STOP TO INFANTS!!

Safe Water Available

Low-nitrate, safe water is available from the restaurant in the southeast corner of the rest-stop area.

INFORMATION

The Turnpike Authority regrets the inconvenience. If you have questions regarding nitrates or the schedule for completing this work, please contact:

Bob Paterson,
Amber Way Turnpike Authority

Exhibit 4

EPA INTERSTATE CARRIER CONVEYANCE
SUMMARY REPORT

1. EPA Log Number _____.

2. Type of Conveyance (aircraft, train, bus, vessel).

3. Company Name.

4. Conveyance Serial Number.

5. Date of all Water System Maintenance.

6. Address of Conveyance Maintenance Area Where Maintenance Is Performed (airport, train station, bus terminal, port, or dock).

7. Maintenance Procedures Used (describe in detail).

8. Name of Maintenance Employees (signatures).

EXAMPLE

Operation & Maintenance Program Plan

(Name of Riverboat Company)

(Names of Individual Riverboats)

Potable Water Systems

General Description: We have a 4" incoming water line from the city system. This line feeds our galley facility on the wharfbarge and branches off to a flexible line that supplies the boats. Water hoses are equipped with atmospheric vacuum breakers and backflow valves to prevent cross-connections.

The (name of boat) has a _____ gallon holding tank which feeds ____ centrifugal water pump(s). The _____ (_____ gallon tank), _____ (_____ gallon tank), and the _____ (_____ gallon tank) operate basically the same.

Operation and Maintenance: We are inspected by the City of _____ _____ for standard plate counts, total coliforms, and staphylococci, on a _____ basis.

On a quarterly basis, we flush and disinfect the systems by:

1. draining the potable water tanks.

2. partially filling and adding enough chlorine to obtain 100-150 ppm at every single outlet on board the boats.

3. securing the systems so the 100-150 ppm level is allowed to stay in the tanks, pumps, and all lines for at least 60 minutes.

4. draining and flushing entire systems to get down to a tolerable level of chlorine (0.5-1.0 ppm). We normally flush all lines at this point with fresh water for 2-4 hours, then test the water for residual chlorine of 0.5-1.0 ppm. This data is all logged..

On a monthly basis, water service vehicles (barges, carts, trucks, etc.) and equipment (hoses, etc.) are flushed and disinfected.

Maintenance Logs: A maintenance log will be maintained for each boat. The logs will include how often disinfection takes place (times and dates), who performed the procedures, and retained for 5 years. These logs will be kept for EPA to examine at its periodic inspections.

_____ _____

Date Name and Title of Owner

Placarding Procedures for Taps Aboard Interstate Carrier Conveyance Which Are Not Intended to Provide Drinking Water

EPA Water Guidance 56B, Implementation of the Safe Drinking Water Act on Interstate Carrier Conveyances, allows conveyance operators to obtain a waiver from the monitoring requirement of the National Primary Drinking Water Regulations (NPDWR). Waivers are available to operators of those vehicles which provide piped water only to restroom wash basins (or other such taps) that is not intended for drinking.

To obtain a waiver, the conveyance operator must install a placard within 12 inches of the tap which points out that the water is not for drinking. Then, the operator must notify EPA in writing of his/her intention not to provide drinking water and that the placards have been installed.

The placard warning that water is not intended for drinking should be at least seven (7) inches in height and fourteen (14) inches in length. The placard should include a nonverbal universal symbol indicating that the water is not for drinking. The symbol should be at least two and one half (2-1/2) inches in height and two and one half (2-1/2) inches in width. Also, the placard should contain the words "DO NOT DRINK WATER" in English, French, and Spanish. The letters which comprise the written statements should be in bold print at least one half (1/2) inch in height. An example of appropriate placard design is attached.

The placard may be of any suitable material, as long as the symbol and lettering are not vulnerable to moisture, sunlight, and temperatures between -50^{o} and 200^{o} F. These environmental constraints also apply to any adhesive used to bond the placard to a surface. The surface of the placard should be such that it cannot be readily defaced by ink or pencil.

If the conveyance operator has permanent placards in place prior to the issuance of these specifications, then new signs do not have to be installed.

Taps which are physically removed or permanently shut off so they no longer provide water need not be placarded. The conveyance operator does not have to request a waiver.

Direct questions pertaining to the above provisions to the appropriate EPA Regional Office (see Exhibit 1).

PLACARD REQUIREMENTS

1. 14" X 7" wood or plastic board.

2. 1/2" letters stating "DO NOT DRINK THE WATER" and use of an international type picture of a drinking water glass with a line through the picture.

Exhibit 7

INTERSTATE CARRIER CONVEYANCE QUESTIONNAIRE

YES	NO	
☐	☐	1. Do you provide drinking water on board? If your answer is yes, complete the remainder of this form. If your answer is no, please complete the information at the bottom of the page and return this form to the EPA Regional Office.
		2. How many persons do you normally have on board?
☐	☐	3. Do you operate 60 days or more a year?
☐	☐	4. Do you provide treatment to the water on board? If so, please describe.
		5. What is the source of the water served on board? City____ Private Well____ Other____
☐	☐	6. Do you have an EPA-approved operation and maintenance (O&M) plan?
☐	☐	7. Do you routinely sample water quality and provide analyses to EPA, FDA, or local health agencies? How often? Monthly____ Quarterly____ Yearly____
☐	☐	8. Have you ever received information about EPA's ICC program?

Please return this questionnaire to the appropriate EPA Regional Office. Thank you for your cooperation.

Company_____Phone No._____

Address_____

Name_____Date_____

Title or Position with Firm_____