ADEM

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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JAMES W. WARR
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April 28, 2004

Mr. Benjamin Grumbles
Acting Assistant Administrator
U.S. EPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Mr. Grumbles:

I am in receipt of your letter dated March 18, 2004, and share your concerns regarding the possible adverse health effects on children at schools and daycare facilities resulting from exposure to elevated levels of lead in public drinking water.

In response to the elevated lead levels recently found in Washington D.C.'s public drinking water, the State of Alabama initiated its own special lead sampling study. The Department reviewed lead sampling results collected throughout the state over the last nine years and, using this data, selected fourteen water systems to be monitored as part of the study. Most of the 14 water systems had experienced elevated lead levels in the past. The majority of the study's samples were collected at schools serving low income residents, typically located in older areas of the community, which are theoretically subject to a higher risk of lead contamination than newer ones.

During the study, two or three samples were collected from each site. If three samples were collected, the first was collected immediately after the faucet was opened, the second after the faucet was flushed for approximately one minute, and the third after the faucet was flushed for four minutes. If only two samples were collected from a site, the first was collected immediately after the faucet was opened and the second after the faucet was flushed for approximately one minute.

Alabama's Lead/Copper Rule requires a water system exceeding the lead action level of 15 ppb to take corrective action. These water systems must collect source water samples, conduct public education, and submit a

corrosion control plan. The corrosion control plan must provide for treatment changes that will render the water noncorrosive. Such treatment changes typically include chemical additions to elevate the pH of the water, or chemical additions which result in the formation of a protective coat on the metal portions of the distribution system.

Sampling results from the study indicate all lead concentrations to be either below detection or significantly below the lead action level. Based on the results of the study and the results of lead monitoring over the past 16 years, we are confident that Alabama does not have a lead contamination problem. It is important to note that Alabama does not currently have any water systems using chloramines as a disinfectant, which appears to be a major factor in the high lead levels in the public drinking water in Washington D.C.

Although these results are encouraging, we will be requesting water systems in Alabama to replace some of their existing lead sampling sites with public school and daycare facility locations and will incorporate this new sampling data in our evaluations. In response to the more stringent requirements under EPA's Disinfectant and Disinfection By-Products Stage 2 Rule, at least two water systems in our state are proposing to convert to chloramines for disinfection. We will educate any system proposing to use chloramines about the potential effects this chemical may have on the distribution system, including effects on lead levels.

Should you have any questions concerning this letter, please contact Ed Hughes with the Department's Drinking Water Branch at (334) 271-7774.

Sincerely,

James W. Warr
Director

cc: Chris Thomas, Chief
Drinking Water Section
EPA Region 4

cc: Dr. Donald E. Williamson
State Health Officer
Alabama Dept. of Public Health

STATE OF ALABAMA DEPARTMENT OF
PUBLIC HEALTH
Donald E. Williamson, MD
State Health Officer

April 29, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
United States Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Grumbles:

Thank you for sharing your agency's concern and efforts in protecting children from exposure to lead in drinking water at schools and day care facilities in the District of Columbia. In response to your request, we would like to share our department's efforts and information regarding monitoring and protecting children from exposure to lead in drinking water.

The Alabama Department of Public Health, with the assistance of the (Center for Disease Control and Prevention) Childhood Lead Poisoning Prevention Program grant, has coordinated the state's childhood lead poisoning prevention programs since early 1991. Under this program, our department monitors and screens children for elevated blood lead levels statewide and conducts environmental lead hazard inspections and risk assessments of homes with identified lead poisoned children for sources of lead exposure including drinking water. In this regard, our investigation may lead to lead hazard inspections of elementary schools and day care facilities if they are suspected sources or if the lead poisoned children spend time there.

Our experience under the above program indicates lead in drinking water has not been a problem in Alabama. Annually, we have been inspecting about 300 residences of lead poisoned children's homes, involved day care facilities, and schools statewide and less than 5 percent had lead in drinking water. The majority involved private water wells with pumps containing lead components. Our protocol for sampling drinking water involves taking first draw samples and post flushing samples to determine sources of lead within a residence and facility or in a water distribution system. All positive readings are reported to the appropriate authority with the recommended corrective action to homeowners.

Coordination and consultation with our state's Environmental Protection Agency, the Alabama Department of Environmental Management (ADEM) concurred that lead in drinking water in general has not been a problem in Alabama. However, ADEM has indicated that they will conduct an in-depth study in schools located in low income community areas that were previously identified with the highest lead readings to ascertain if we have problems in specific areas. The problem in Washington, D.C. appears to be associated with the use of chloramines for disinfection. At present, there are no water systems in the state using chloramines.

The RSA Tower • 201 Monroe Street • Montgomery, AL 36104
P.O. Box 303017 • Montgomery, AL 36130-3017

In light of potential and continued need of controlling lead in drinking water for schools and day care facilities, we intend to continue aggressive monitoring of these facilities in conjunction with our childhood lead poisoning prevention program and offer outreach/education and water sampling services. In furthering our state's preventive efforts, we recommend your agency continue to provide public awareness/educational programs addressing lead in drinking water in school and day care facilities.

I sincerely appreciate you bringing this important environmental health issue to our attention and making us aware of the need in monitoring lead in drinking water in schools and day care facilities. Please do not hesitate to contact me or William P. Allinder, Director of Bureau of Environmental Services, at (334) 206-5373 if you have any questions regarding this matter and for our further collaborative efforts.

Sincerely,

Donald E. Williamson, M.D.
State Health Officer

DEW/lds
cc. State Department of Environmental Commissioner
EPA Region IV Administrator
ADEM

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

OFFICE OF THE COMMISSIONER

FRANK H. MURKOWSKI, GOVERNOR
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Juneau, AK 99801-1795
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FAX: (907) 465-5070
http://www.state.ak.us/ADEC/

April 5, 2004

Benjamin Grumbles
Acting Assistant Administrator
U.S. Environmental Protection Agency
1200 Constitution Ave., N.W.
Washington, D.C. 20460

This may be more info than you were seeking - our staff worked very hard on this program. Ben

Dear ~~Mr. Grumbles~~:

Thank you for your recent letter inquiring about lead in drinking water in Alaska schools and day care facilities. The Alaska Department of Environmental Conservation's (ADEC) Drinking Water program regulates drinking water throughout Alaska -- at schools, daycares, and numerous other facilities. ADEC regulates schools and day care facilities the same way it regulates other water systems.

The Lead and Copper Rule applies to 645 public water systems in Alaska, 96 of which are schools and 26 serve daycare facilities. 8 currently have unresolved lead related drinking water compliance issues. These 8 schools serve a population of 1065 children. Several of these schools have corrective actions planned. There have been no lead exceedences at Alaska daycare facilities.

ADEC has created the *Safe Drinking Water for our Schools* project to help encourage compliance in cooperation with the Department of Education, Department of Health and Social Services, University of Alaska Southeast, Training and Technical Assistance Center, Alaska Rural Water Association, and the Alaska Native Tribal Health Consortium. A customized handbook was developed for each school that contains school specific compliance monitoring schedules, sample collection fact sheets for the school's drinking water system, and EPA fact sheets for each drinking water rule. We also provided each school board a report card indicating a letter grade based on their drinking water compliance. Information on this project can be found at http://www.state.ak.us/ADEC/eh/dw/schools/schools.html.

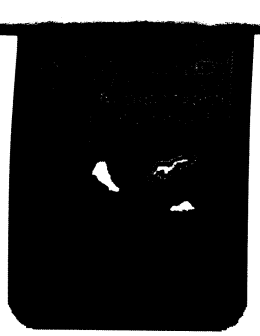
ADEC's Drinking Water Program Manager, James Weise is available at 907-269-7647 to provide further information to you or your staff.

Sincerely,

Ernesta Ballard
Commissioner

Enclosure: *Safe Drinking Water for our Schools* fact sheet
Operator's Handbook

cc: John Iani, Regional Administrator, EPA Region X
Ken Fisher, Alaska Operations Office, EPA Region X
Marie Jennings, Drinking Water Unit, EPA Region X
Kristin Ryan, Director, Division of Environmental Health, ADEC
James Weise, Division of Environmental Health, Drinking Water Program, ADEC



Safe Drinking Water for our Schools

Alaska Department of Environmental Conservation (ADEC), Division of Environmental Health, Drinking Water and Wastewater Program has the responsibility for public health protection by ensuring compliance with the state drinking water regulations for Public Water Systems (PWS). These regulations are required by the federal Safe Drinking Water Act and associated amendments.

What is a Public Water System? They are systems that provide water to consumers, and are not a private well. A class "A" PWS serves at least 25 individuals or 15 service connections year round, or serves the same 25 individuals for at least 6 months a year. A class "B" PWS is a system that regularly serves at least 25 individuals each day for at least 60 days a year.

Why do we need the regulations? The drinking water regulations set the standards for safe drinking water, they identify contaminants and the allowable level of contaminants in the water that are, or could be, harmful for those who drink the water. Children are particularly sensitive to environmental pollutants. Pound for pound children eat more food, drink more water and breathe more air than adults do.

What type of contaminants do we regulate? Examples include:

Bacteria and Viruses (from septic systems and sewage etc)

Lead and Copper

Nitrate and Nitrite

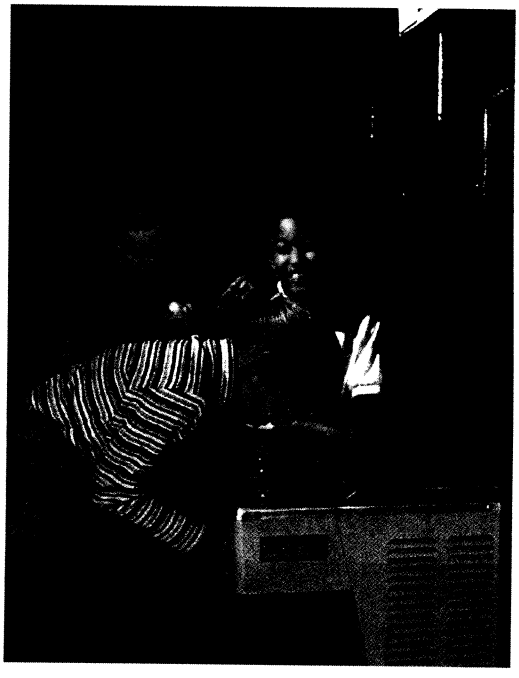
Heavy Metals like arsenic, cadmium, barium, and cyanide

Volatile Organic Contaminants (VOC) like benzene and gasoline

Synthetic Organic Contaminants (SOC) like pesticides and herbicides

Other Organic Contaminants (OOC) like Dioxin and PCBs

How do these contaminants effect us? Exposure come from many sources, drinking water is one of them. Studies demonstrate that a variety of chemicals and contaminates commonly encountered in homes and schools can contribute to health and developmental disorders. Consuming water containing contaminants above the Maximum Contaminant Level (MCL) set by the regulations over a period of time can cause health problems.



How does that involve schools and our kids? Schools are either supplied water by the community PWS or they have their own drinking water supply and are a PWS themselves. ADEC is currently working on a project to increase the compliance rate of schools that have their own PWS, with the state drinking water regulations.

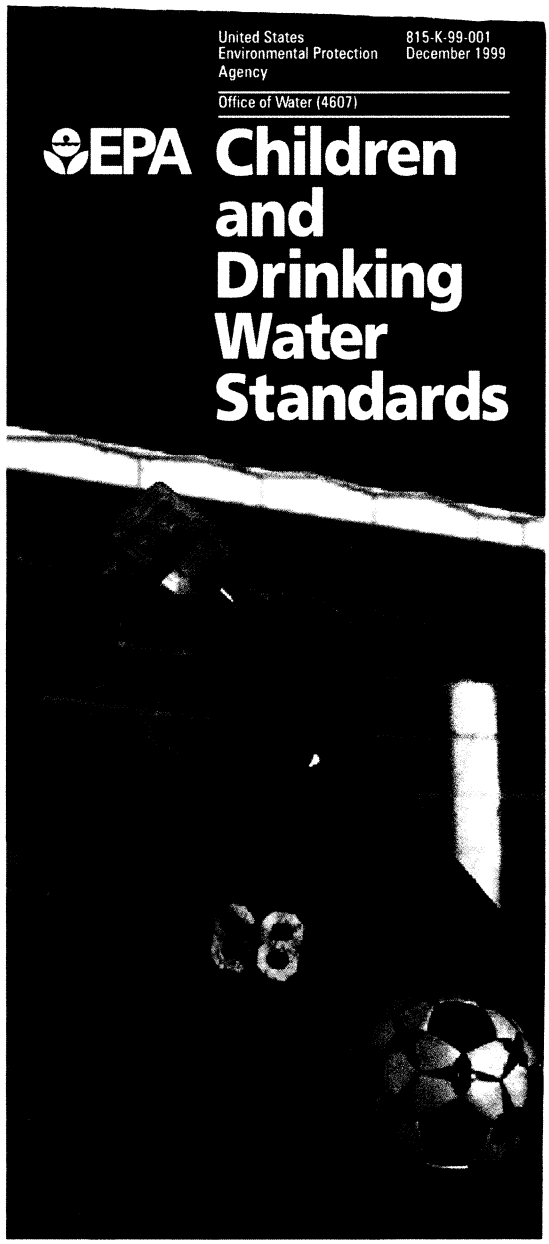
Why does ADEC want to increase compliance?
Ultimately, for public health protection. Like all parents, teachers, and concerned individuals, ADEC feels a strong responsibility to our children. ADEC feels not only do we have a responsibility to ensure our children learn what they need in school to become a functioning part of our society, but they should be taught in a safe environment to ensure they are healthy when they leave their schools.

What can you do? First ask yourself this - *"Are your kids drinking safe water in schools?"*

If you don't know the answer to this you need to get involved. Ask your child's school if they are on their own PWS or get the name of the PWS that supplies the water to the school. Ask if they've had any violations during the previous year.

If you are the PWS operator ask yourself if you're doing the best job you can be doing. If not, why not? Is there something DEC staff can do to help you do a better job? If so let us know. If the school can help you do a better job, let them know!

If you are a school district or Dept. of Education employee, do what you can to make sure the PWS operator has the resources they need to do the job, OR, if the schools water is supplied by another PWS, make sure it is adequate. You are paying for a service, make sure you are getting what you pay for.



You may contact ADEC for further information:

Anchorage - 269-7656
Fairbanks - 451-2108
Juneau - 465-5350
Soldotna - 262-5210
Wasilla - 376-5038

For more information on the "Safe Drinking Water in our Schools" Project, please contact Kathy Kastens, ADEC Project Coordinator, at 269-7639.

Websites for ADEC and EPA:
http://www.state.ak.us/dec/deh/water/
http://www.epa.gov/safewater/

EPA Educational Websites for teachers and students:
Http://www.epa.gov/teachers/
Http://www.epa.gov/students/
Http://www.epa.gov/safewater/kids/other.html

Children may be more susceptible to chemical contaminants that affect learning, motor skills, and hormones, during important stages of growth.

Safe Water - Drink it for Life !!

STATE OF ALASKA

DEPT. OF HEALTH AND SOCIAL SERVICES

OFFICE OF THE COMMISSIONER

FRANK H. MURKOWSKI, GOVERNOR

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April 6, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water (4101M)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Mr. Grumbles,

Thank you for your recent inquiry about Alaska's efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities. I am familiar with the current events in Washington D.C. and the elevated lead levels in the drinking water, and would like to assure you that Alaska does not face a similar problem. I am confident that, through the combined efforts of the Alaska Department of Environmental Conservation and the Alaska Department of Health and Social Services, Alaska's children are well protected from potential lead exposures.

Within Alaska, the Department of Environmental Conservation (ADEC) regulates drinking water standards for public water systems under the Alaska Drinking Water Regulations (18 AAC 80). Unlike other states, Alaska has only one borough (the North Slope Borough) and one community (the Municipality of Anchorage) with local health powers. It is my understanding that ADEC has provided a written response to your inquiry that provides additional detail regarding their activities in regulating drinking water. In addition to regulatory oversight, the ADEC also recently developed a project designed to address issues of non-compliance regarding testing of drinking water at schools around the state. The Alaska Department of Health and Social Services (ADHSS) has been an active participant in the workgroup, and is pleased to report that the workgroup has successfully and dramatically improved compliance by schools statewide. Information on this project is available at http://www.state.ak.us/ADEC/eh/dw/schools/schools.html.

The ADHSS maintains an active lead surveillance database, and investigates all reports of blood lead levels ≥ 10 µg/dL. ADHSS maintains a close collaboration with ADEC, and when schools are identified with elevated water lead levels, ADHSS, Section of Epidemiology has performed a full field investigation. The investigations include additional water testing and blood lead testing of teachers and students. Information on one such investigation is available at http://www.epi.hss.state.ak.us/bulletins/docs/b1999_07.htm. In every instance, these investigations determined that no elevations in blood lead levels had occurred.

I commend your efforts to ensure that children remain safe from lead exposures, and appreciate the opportunity to provide you with an overview of our programs. If you or your staff would like additional information regarding our childhood lead poisoning prevention efforts, please feel free to contact our Environmental Public Health Program Manager, Tracey Lynn, at 907-269-8045.

Sincerely,

Joel Gilbertson
Commissioner

JSG:lb

Cc: Doug Bruce, Director
Department of Public Health

Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us

Stephen A. Owens
Director

April 28, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. EPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Re: State Programs to Control Lead in School Drinking Water

Dear Mr. Grumbles:

Thank you for your inquiry into Arizona's efforts to monitor and protect children from exposure to lead through drinking water at schools and childcare facilities. The Arizona Department of Health Services (ADHS) and the Arizona Department of Environmental Quality (ADEQ) have been aggressive in their efforts and are working together to undertake a comprehensive strategy to reduce this risk to Arizona's children.

ADHS administers the Arizona Lead Poisoning Prevention Program. This program consists of several program elements including lead poisoning blood studies, a physician's guide for medical case management for lead poisoned adults, brochures on childhood lead poisoning, a reporting requirement for elevated blood lead levels, and a targeted lead poisoning screening plan. The results of this comprehensive strategy are captured in the attached 2002 annual report.

ADEQ has primacy for the Safe Drinking Water Act. Its oversight and compliance work for the lead and copper drinking water rule are conducted through ADEQ's Safe Drinking Water Program. In Arizona, the vast majority of schools are connected to a regulated public water system and do not have individual water systems. Only a very small percentage of public water systems in Arizona have exceeded the lead or copper action levels. ADEQ provides prompt compliance assistance and enforcement work to bring any system with exceedences into compliance.

In addition to formal enforcement and compliance activities, ADEQ is addressing the issue of exposure to lead through drinking water through its Children's Environmental Health Project by

developing a curriculum module for schools. This module is intended to provide education about lead in drinking water to both students and administrators. It will actively engage children in conducting drinking water lead investigations at their schools and also provide practical ways administrators and other school personnel can reduce potential risks to children.

In light of the recent developments in the Washington, D.C. area schools, ADHS and ADEQ are collaborating on a study of lead in drinking water in Arizona schools. Some 96 schools from throughout Arizona have been asked to participate in this study. These were randomly selected using a profile to determine the most at-risk schools. We expect the results of this study to be ready in early fall and will be published in the form of a Health Consultation pursuant to a cooperative agreement grant from the U.S. Agency for Toxic Substances and Disease Registry.

We share your concerns and applaud your efforts to reduce children's risk of lead exposure through drinking water at schools. Lead exposure is an environmental health risk to children that is one hundred percent preventable. ADHS and ADEQ are working together toward this goal in Arizona. Please contact us if we can provide any additional information about our efforts.

Sincerely,

Catherine R. Eden, Director
Arizona Department of Health Services

Stephen A. Owens, Director
Arizona Department of Environmental Quality

ADEQ
ARKANSAS
Department of Environmental Quality

April 2, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Grumbles:

On March 18, 2004 you wrote asking if Arkansas is currently implementing a program to control lead in drinking water for schools and day care facilities.

The Arkansas Department of Environmental Quality does not have jurisdiction over the State's drinking water program. That authority rests with the Arkansas Department of Health which is on your addressee list. The ADEQ does implement a program which regulates lead-based paint activities. As part of this program we have conducted outreach to schools and other child occupied facilities.

If we can be of any further help do not hesitate to contact us.

Sincerely,

Marcus C. Devine
Director

OFFICE OF H2O LET.DOC
4/2/2004 2:06 PM

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Fay W. Boozman, MD, MPH, Director
Mike Huckabee, Governor

March 24, 2004

Mr. Benjamin Grumbles
Acting Assistant Administrator
Office of Water
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: State Programs to Control Lead in School Drinking Water

Dear Mr. Grumbles:

Your letter of March 18 to Dr. Fay Boozman, Director, Arkansas Department of Health regarding the above referenced subject was referred to me for response.

As referenced in your letter, the Lead Contamination Control Act of 1988 (LCCA) was the first step in determining lead levels delivered by water coolers in schools and licensed child day care facilities. The Department complied fully with this program. To the best of my memory we had a compliance rate in excess of 95%. (Files on this rule currently reside in a storage room.) To the best of our knowledge any coolers found to be contributing lead above the specified limit were either replaced or removed. The agency even went a step further and published in a statewide newspaper the names of all schools which were either delinquent in their monitoring or failed to notify our office of the testing results. In addition, the Department did institute a limited blood lead screening program at its local health units. Further, in the case of day care centers, if a center did not have coolers then the Department strongly encouraged the sampling of any taps used to provide drinking water. All of this was accomplished without any extra financial support from EPA.

Currently, efforts in monitoring and controlling lead levels are limited to public drinking water supplies. This includes both community and non-community non-transient (NCNTPWS) public water systems. In most instances across the state,

the schools receive their drinking water through purchasing from an existing public water system. Those public water systems are regulated under the Lead and Copper Rule. In this case the only way a school would be directly monitored would be if water system officials chose a monitoring point on the school grounds. There are also some schools in rural areas that own and operate their own water supply system. These schools would be considered a NTNCPWS and their water systems would be regulated under the provisions of the Lead and Copper Rule.

Outside of the Lead and Copper Rule, there are no special programs in place to monitor for these contaminants in public water systems, including schools. Certainly if a school had reason to believe it had high lead or copper levels (or other contaminants) and requested that the Department collect some investigative samples at the school, then we would do so subject to any laboratory loading constraints.

I hope this is of some benefit to you. If you have any questions you may contact me at 501-661-2623 or bmakin@healthyarkansas.com.

Sincerely,

Bob Makin, P.E., Assistant Director
Division of Engineering

Cc: Jose Rodriquez, Acting Section Chief
Drinking Water Section
EPA Region 6

...ZENEGGER
...OVERNOR

State of California
HEALTH AND HUMAN SERVICES AGENCY

S. KIMBERLY BELSHÉ
SECRETARY

March 30, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your recent letter regarding the United States Environmental Protection Agency's (US EPA) interest in learning more about state and local efforts to protect children from exposure to lead in drinking water in schools.

The Department of Health Services (DHS) is responsible for implementing a series of bills enacted over the past decade to prevent childhood lead poisoning. Utilizing a multi-faceted approach to the complex issues raised by childhood lead exposure, DHS has undertaken a number of activities to better understand, assess and prevent childhood lead poisoning. Among its activities, in 1998 DHS conducted a "Lead Hazards in Schools" study to determine how common lead and lead hazards were in California's public elementary schools and childcare facilities. This survey found that most schools, like most housing, have at least some lead-containing paint. The Department has used the findings of this survey to help develop and implement a multi-year California Lead Safe Schools Program.

Given your interest in learning more about programs currently being implemented by states to control lead in drinking water for schools and day care facilities, I have shared a copy of your letter with Rich Bayquen, Chief Deputy Director of DHS, for the department's review and response. I am confident that Mr. Bayquen will be able to provide you with a more detailed update regarding DHS' efforts in this important area of public health activity.

Sincerely,

Kim Belshé

KIMBERLY BELSHÉ
Secretary

KB/mcv

c: Rich Bayquen, Chief Deputy Director, DHS

1600 Ninth Street · Room 460 · Sacramento, CA 95814 · Telephone (916) 654-3454 · Fax (916) 654-3343
Internet Address: www.chhs.ca.gov

California Environmental Protection Agency

Air Resources Board • Department of Pesticide Regulation • Department of Toxic Substances Control
Integrated Waste Management Board • Office of Environmental Health Hazard Assessment
State Water Resources Control Board • Regional Water Quality Control Boards

Arnold Schwarzenegger
Governor

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May 11, 2004

Mr. Benjamin Grumbles
Acting Assistant Administrator
Office of Water
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your letter of March 18, 2004, regarding California's efforts to monitor and protect children from exposure to lead at schools and day care facilities. I understand that a similar letter was sent to Ms. Kimberly Belshe, Agency Secretary of the Health and Human Services Agency.

The Health and Human Services Agency, specifically Department of Health Services (DHS), has primary responsibility for implementing drinking water laws in California, as well as implementation of the "Lead-Safe Schools Protection Act" (Education Code section 32240-32245). Given that those responsibilities fall within her Agency, I believe that Ms. Belshe can fully respond to your inquiry.

California, during the last decade, enacted landmark legislation to prevent childhood lead poisoning. This legislation established the Childhood Lead Poisoning Prevention Branch (CLPPB), a children's environmental health program offering multi-layered solutions to this complex problem. The CLPPB prepared a 1998 report, *Lead Hazards in California's Public Elementary Schools and Child Care Facilities*, which may be of interest to you; the report and other resources provided by CLPPB are available at http://www.dhs.ca.gov/ps/deodc/childlead/html/materials.html.

Within the California Environmental Protection Agency (Cal/EPA), the Office of Environmental Health Hazard Assessment (OEHHA) implements the Proposition 65 listing program. OEHHA listed lead as a developmental toxicant in 1987, and lead and lead compounds as carcinogens in 1992. This Proposition 65 listing has led to many efforts that protect children from lead exposure, including the prohibition of lead in pipes, solder, and paints. For additional information on OEHHA's Proposition 65 program relating to lead, please contact Dr. George Alexeeff, at (510) 622-3202.

Thank you again for writing. Should you have any questions or need further assistance, please contact Ms. Tam Doduc, Deputy Secretary for Environmental Quality, Cal/EPA, at (916) 445-1399.

Best regards,

Terry Tamminen
Agency Secretary

cc: Ms. Kimberly Belshe
Agency Secretary
Health and Human Services Agency
16 Ninth Street, Room 460
Sacramento, California 95814

State of California—Health and Human Services Agency
Department of Health Services

California
Department of
Health Services

SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

April 30, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
Washington, DC 20460

Dear Mr. Grumbles:

This is in response to your recent letter to California Health and Human Services Agency Secretary Kimberly Belshé in which you requested information on the efforts by the State of California to control lead in drinking water for schools and day care facilities. In particular you asked if California is currently implementing a program to control lead in drinking water for schools and day care centers; and, if not, what other steps has California taken to reduce lead exposure in schools.

California has taken several steps to address lead in drinking water for schools and day care facilities. In 1987, 1988, and 1989, the California Department of Education (DOE) issued advisories regarding drinking water fountain testing to the state's 1,000 school districts, which include almost 5,000 public schools and child care facilities. In 1994, another advisory was issued warning of lead hazards in paint, soil, and drinking water. These advisories provided guidance on identification and testing of potential lead exposure hazards.

The California Department of Health Services (DHS) in administering the federal and state Safe Drinking Water Acts requires all schools and day care facilities that are public water systems to meet the provisions of the federal Lead and Copper Rule. DHS also has a Childhood Lead Poisoning Prevention Program (CLPPP) whose mission is to eliminate childhood lead poisoning by identifying and caring for lead burdened children and preventing environmental exposures to lead.

Beginning in 1994, DHS conducted a study of the extent of lead contamination in paint, soil, and water in California schools. Data were collected from 200 randomly selected

schools between 1995 and 1997. A report on the findings of the study was completed in 1998. A copy of the Executive Summary is enclosed. The full report is located at the following Internet address: http://www.dhs.ca.gov/childlead/schools/sitemap.htm.

Based on water samples collected at each of the schools, the report indicated that an estimated 18.1 percent of California schools are likely to have lead in drinking water at or above the federal action level of 15 parts per billion (ppb). Lead exceeding this level was found at 10.5 percent of schools where the outlet that was sampled had been used within 24 hours of testing.

As a result of these findings, $1,053,000 was provided in the state 1998-99 fiscal year budget to test for the presence of lead in drinking water in public elementary and secondary schools. The funds were administered by DOE. DHS provided technical guidance to the schools including sample collection methods, laboratories that were certified to analyze the samples, and interpretation of results. This information continues to be provided on DHS Internet web sites and DHS staff continue to be available to provide information to schools on potential mitigation measures where elevated lead levels are detected.

In 2000, the DOE in cooperation with DHS, the University of California at Berkeley (UCB), and several school districts established the Lead-Safe Schools Project. Through UCB's Labor Occupational Health program the project provides training, publications, and a toll-free telephone hotline for California school districts and staff. Although the focus of the activities are directed at reducing the hazards of exposure to lead in paint, drinking water is also recognized as a potential route of exposure. Several guidance documents including the Lead-Safe Schools Guide and Working in a Lead-Safe School stress the need to test the drinking water and provide information on measures to reduce lead exposure. In 2000, DOE contacted all school administrators and maintenance directors about the Project and provided a copy of the Lead-Safe Schools Guide. Information about this groundbreaking program can be located on the Internet at http://ist-socrates.berkeley.edu/~lohp/Projects/Lead-Safe_Schools/lead-safe_schools.html. To date, over 70 percent of the state's public school districts have received training through the Lead-Safe Schools Project including all school districts with significant enrollments.

As you can see, California has undertaken a strong multi-agency effort to determine the levels of lead in drinking water for schools and child care facilities and to educate school personnel on the hazards of lead in the school environment including drinking water.

If you would like more information on DHS CLPPP, please contact Dr. Valerie Charlton, Chief of the Childhood Lead Poisoning Prevention Branch, at (510) 622-5000.

Sincerely,

Kevin Reilly
Deputy Director
Prevention Services

Enclosure

cc: Kimberly Belshé, Secretary
Health and Human Services Agency
1600 Ninth Street, Room 460
Sacramento, CA 95814

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California Department of Health Services.c1.Department of Health Services
Childhood Lead Poisoning Prevention Branch

Report to the Legislature: Lead Hazards in California's Public Elementary Schools and Child Care Facilities

EXECUTIVE SUMMARY

Purpose of the Report

In 1992, the California State Legislature approved *The Lead-Safe Schools Protection Act* (LSSPA) (Education Code, ß 32240-32245) in response to concerns about the presence of lead hazards in schools. The Act required the California Department of Health Services (DHS) to conduct a study to determine the prevalence of lead and lead hazards in California's public elementary schools and childcare facilities, to report individual findings to participating schools, to make recommendations on the feasibility and necessity of conducting statewide lead testing in schools, to develop environmental lead testing methods and standards, to evaluate lead abatement technologies, and to work with the California Department of Education (CDE) to develop voluntary guidelines to minimize lead hazards in schools.

Beginning in 1994, DHS conducted a study of the extent of lead contamination in paint, soil and water in California schools. Data were collected from 200 randomly selected schools between 1995 and 1997. This report presents the findings of the study to the State Legislature and makes recommendations for ensuring that all California schools are lead-safe.

Health Effects of Lead

Lead is a highly toxic heavy metal that adversely affects virtually every organ system in the body. Fetuses and young children are particularly susceptible to the effects of lead. The US Centers for Disease Control and Prevention (CDC) has found that "lead poisoning remains the most common and societally devastating environmental disease of young children" (CDC, 1997). Most children with lead poisoning have no overt symptoms, but can suffer permanent neurological deficits and behavioral problems, including attention deficit disorder and loss of IQ points. Childhood lead poisoning has a significant financial cost as lead poisoned children incur significant medical and special education costs and have reduced lifetime earning potential.

Sources of Lead

There are numerous sources of lead in the environment, ranging from paint pigments to industrial and hobby materials. Three of the most common sources of lead are paint, soil and water.

Before 1950, lead was commonly added to paint to enhance durability. In 1955, the paint industry adopted a voluntary one percent limit on lead concentration in interior paint. In 1978, the Consumer Product Safety Commission (CPSC) banned the manufacture of most paints containing more than 0.06 percent lead. Any existing lead-based paint that is in poor condition is a potential hazard. Components coated with lead-based paint that abrade one another as they are moved, such as windows and doors, represent the highest potential source of exposure from lead paint.

Soil can become contaminated from paint chips and lead-containing dust that falls from nearby structures. Lead is also present in soil as a result of gasoline emissions prior the 1980s when lead was phased out as a gasoline additive.

Water can become lead-contaminated when lead leaches from plumbing and fixtures, or when the water supply is contaminated. Plumbing installed before 1930 is considered most likely to contain lead. However, newer plumbing is often connected with lead solder, the use of which was not prohibited until 1984.

Children at highest risk for lead poisoning are younger than school age. Most children with elevated blood lead levels are exposed to multiple sources of lead at more than one location (CDC, 1997). When a child with high blood lead levels is identified, local public health and environmental health staff investigate possible sources of lead exposure. Nearly always, lead sources in the home environment are identified. Lead hazards at school have not been found to be the primary source of lead in any childhood lead poisoning case in the DHS lead poisoning surveillance system.

Study Methods

The two goals of the study were (1) to estimate the extent to which lead is a contaminant of paint, soil, and water in California's public elementary schools, and (2) to describe operations and maintenance practices as they may contribute to (or protect against) the generation of lead hazards on public schools grounds. To address the first goal, DHS researchers conducted a survey of paint, soil, and water in a representative sample of 200 of California's public elementary schools and day care facilities. To address the second goal, researchers administered a questionnaire regarding maintenance and operations practices to public schools facilities managers.

At each school, paint, soil and drinking water samples were collected from the oldest building, which was assumed to be most likely to contain lead hazards. A maximum of four interior and seven exterior paint chip samples were collected. Researchers assessed the overall condition of the painted surface from which samples were taken. Wherever possible, paint chip samples were obtained from areas where the paint was visibly deteriorated, as these areas represent the highest potential hazard. A maximum of seven soil samples were taken at each school. Soil samples were collected from within five feet of painted walls or windows, within play areas, and from a location on the school grounds which was as far away from any buildings as possible in order to establish a background level. Four drinking water samples were collected from each school: two from an inside outlet and two from an outside outlet. The first sample was taken
immediately after the spigot was opened, and the second after the water was allowed to run for 30 seconds.

A questionnaire was administered to 83 school facilities managers at a California Association of School Business Officials conference in 1997. Participation was voluntary and anonymous. The questionnaire was designed to survey awareness and use of lead-safe work practices, as well as knowledge of and attitudes about lead as an environmental contaminant.

Summary of Findings

1. Paint

The U.S. Environmental Protection Agency (USEPA) defines lead-based paint as 5000 parts lead per million parts paint (ppm). Given the findings of the study, it is estimated that 77.7 percent of

California's public elementary schools and child care centers have been painted with lead-based paint. Lead in paint at schools was found at about the same frequency as has been found in California homes of similar age.

Cal/OSHA defines lead-based paint as paint with any detectable lead. This stringent definition is useful for protecting workers and others when disturbing lead-containing paint with activities like surface preparation for repainting, and where paint is deteriorating. Using this definition, it is likely that 95.8 percent of schools have some lead-containing paint. The study also shows that only 37.8 percent of the schools with some lead-containing paint also have some paint that is deteriorated. Within the representative sample of schools in the study, lead content of paint is significantly and inversely related to school age. Only one paint sample (taken from an interior door) above 5000 ppm was found at any school built after 1979. Exterior trim paint tended to have the highest average lead content, followed by (in descending order of lead content) interior trim, interior wall and exterior wall paint.

2. Soil

According to study data, it is likely that six percent of California public elementary schools have bare soils with lead levels that exceed the USEPA reference value for bare soil in areas where children play (400 ppm). Soils that contain lead at or above that level are likely to be located close to school buildings and more likely to occur at schools built before 1940. It is not possible to determine from study data the source of the lead in the sampled soil. Characterizing soils at any particular school site will require a more detailed sampling protocol than this study could employ, and state-wide applications of study results are limited.

3. Drinking Water

USEPA has set the action level for lead in drinking water at 15 parts lead per billion (ppb) parts water. The action recommended by USEPA is to remove the drinking water outlet from service immediately until the lead content falls below the action level. Study data indicate that an estimated 18.1 percent of California schools are likely to have lead in drinking water at or above the federal action level. Lead exceeding this level was found at 10.5% of schools where the sampled outlet had been used within 24 hours of testing. These findings indicate that in some situations drinking water from school water outlets could contribute to children's lead exposure, and demonstrate a need for monitoring lead from drinking water outlets in schools.

Water from outlets that have been left standing for 24 hours are generally more likely to contain higher lead levels than water from outlets that have recently been flushed. However, within the study, this flushing procedure did not always reduce lead content to below the action level. The age of the school was not a significant factor in the amount of lead in drinking water.

4. Maintenance and Operations

Based on responses to the study questionnaire, it is evident that a majority of facilities managers believe that lead hazards in school pose a significant problem. However, only 11 percent of respondents reported that their school had any lead hazard control program in place. Few reported that facilities managers or their staffs had attended a DHS-accredited lead-related construction training course. Additionally, most of the respondents reported using unsafe work practices for managing lead-containing paint. Seventy-four percent of respondents thought that training in lead-safe work practices would be extremely useful for their district.

Conclusions

1. Paint

As in housing stock in California and across the nation, lead-containing paint is present in most California public elementary schools and child care facilities. With proper training, resources, and support, it can be managed safely as part of standard maintenance and operations practices.

If lead-safe work practices are instituted and continued over time, they are safer, more efficient, and more cost effective than wholesale removal of lead-containing paint. Removing lead-containing paint incorrectly can actually increase the risk of exposure to children. Interim control measures, (management in place), is the safest alternative.

2. Soil

The lead content of bare soil may be elevated if the soil is close to pre-1940's painted exterior walls. Simple steps such as limiting access to these areas or permanently covering them can eliminate potential exposure hazards to children.

3. Drinking Water

Lead may be present in drinking water in up to one in five of California public elementary schools and child care facilities. A testing and replacement program will identify and eliminate this potential source of exposure. The USEPA standard of 15 ppb has a safety factor built into it. Thus it is very unlikely that a child who drinks tap water with the exceedances which were found in this study would develop significantly elevated blood lead levels from this source alone. Many of California's public schools have already completed testing of school drinking water outlets.

DHS Action Plan

The findings of this study require immediate action, and DHS has begun to work with CDE to develop, implement, and support a four-year California Lead-Safe Schools Program to promote safe and cost-effective lead-safe work practices among Local Education Agencies (county and local school districts). The program will concentrate on lead-based paint maintenance practices that will decrease childhood exposures to lead. It will include the following key elements: 1) voluntary lead-safe work practice guidelines for schools, 2) identification of high risk tasks and occupational groups, 3) training programs aimed at reducing exposure risks to children and staff, 4) a time-limited technical assistance and support program, and 5) evaluation.

Recommendations

These recommendations are designed specifically to address the needs of public elementary schools and child care facilities that are located on public elementary school grounds. They incorporate existing lead-safe procedures considered by HUD and USEPA to be the "best practices" in the construction and maintenance industries. However, their utility is not limited: they may be applicable in other settings where young children are present on a regular basis.

1. Paint

Prioritize deferred maintenance activities to classrooms that house the most vulnerable children. Deteriorated paint that contains lead presents the greatest opportunity for exposing young children to lead hazards. The most vulnerable children in public schools settings are those in pre-kindergarten through grade 2, and those with developmental disabilities. Targeting their classrooms is the surest way to reduce opportunities for exposure to lead, but only if the deferred maintenance activities are conducted when children are not present and if the work area is thoroughly cleaned afterwards. Assume that painted surfaces contain lead and use lead-safe work practices, unless the paint is tested. These practices include using sprayers to mist painted surfaces while sanding to reduce dust, using clean plastic tarpaulins, avoiding "dry" sanding and scraping that generates dust, and cleaning thoroughly after

work is completed. Lead-safe work practices minimize the production of lead dust and paint chips and minimize contamination of the environment. Keep children, pregnant women and school pets away from potentially contaminated work areas.

2. Soil

Fence off or cover bare soil adjacent to painted exterior walls of buildings constructed prior to 1940 because these areas are likely to contain lead levels that exceed the USEPA recommendation of no more than 400 parts per million lead in bare soils in which children play or garden. Unless they are tested for lead content, soils adjacent to painted exterior walls are not appropriate to use for children's demonstration gardens, rainbow gardens, or other educational activities. These areas should never be used as children's play areas.

3. Water

Evaluate the lead content of school drinking water at the outlet following USEPA protocols at schools that have not already done so. The lead content of drinking water was not completely predicted by age of the school, the length of time the water had been standing in the pipes, or by using the USEPA "flushing" procedure. When lead content exceeds the USEPA action level of 15 parts per billion and USEPA-recommended remedial action does not reduce lead content to below 15 parts per billion, Local Education Agencies should make that outlet inoperable and supply alternative sources of drinking water until lead content is reduced to acceptable levels.

4. Work Practices and Personnel

Use lead-safe work practices, and adopt and support the voluntary Lead-safe Schools Program, once it is in place. This program will protect children and staff, and prevent costly and unnecessary over spending. Program activities should be fully integrated into daily practices so that they become a standard part of regular work activities.

Use the expertise of DHS Certified Lead-Related Construction personnel. The Lead-safe Schools Protection Act of 1992 requires that LEAs use DHS Certified Lead-Related Construction personnel for identifying and abating lead hazards. Always verify certification. Each Lead-Related Construction professional who is properly certified has received a photo identification card from the Department of Health Services. The identification card lists the categories in which the individual is certified, along with expiration dates. *This DHS Lead-Related Construction identification card is the only proof of certification that public schools or the public at large should accept.*

Assure that workers are properly trained. Although existing training materials have not been modified to meet the specific needs of the public school environment, LEAs can use existing guidance and materials to assure that workers who may disturb lead in paint are identified, trained, and (if necessary) that they are DHS Lead-Related Construction Certified.

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CHILDHOOD LEAD POISONING PREVENTION BRANCH

California, during the last decade, enacted landmark legislation to prevent childhood lead poisoning. This legislation has established the Childhood Lead Poisoning Prevention Branch (CLPPB) a children's environmental health program offering multi-layered solutions to this complex problem.

California Childhood Lead Poisoning Prevention Branch: About the CLPPB

CLPPB Overview

About the Branch

Vision: The Childhood Lead Poisoning Prevention Branch's vision is a healthy, lead-safe environment whe can achieve their full potential.

Mission: The mission of the Childhood Lead Poisoning Prevention Branch is to eliminate childhood lead p identifying and caring for lead burdened children, and preventing environmental exposures to lead.

Goals: The Childhood Lead Poisoning Prevention Branch has six goals.

- An informed public able to protect children from lead exposures;
- Well-supported, effective local programs to detect, manage and prevent childhood lead pc
- Fully developed capacity to track lead exposure statewide and to monitor the managemen burdened children;
- Strong infrastructure and preventing children's exposure to lead through partnerships with agencies, community-based organizations, and the private sector;
- Full compliance with Federal and State statutory and regulatory requirements; and
- Continued State and national leadership through research, policy development and stand

California Statutues Governing Childhood Lead Poisoning Prevention Branch

Childhood Lead Poisoning Prevention Act
California Health & Safety Code (105275 to 105310)

Establishes the Childhood Lead Poisoning Prevention Program within the California Department of Health requires them to compile information, identify target areas, and analyze information to design and impleme medical follow-up and environmental abatement to reduce childhood lead exposure.

Accreditation of Training Providers and Certification of Individuals
(California Health & Safety Code 105250)
Establishes a program to accredit lead-related construction training providers and certify individuals to con construction activities.

Reporting of Elevated Blood Lead Levels by Medical Laboratories
(California Health & Safety Code 124125 to 124165)
Declared childhood lead exposure as the most significant childhood environmental health problem in the st medical laboratories to report cases with elevated blood lead levels. Mandates childhood lead poisoning pr activities be established by the Department of Health Services, including identification and selection of targ childhood lead screening programs, field trials of alternative lead abatement technologies, implementaion c identify and follow-up high risk children, provision of environmental abatement and continued programs to r incidence of excessive childhood lead exposure.

Lead Exposure Screening
(California Health & Safety Code 1367.3 to 1374.15)

Requires blood lead screening for children covered by health insurance.

Real Estate Disclosure Requirements
(California Civil Code 1102 to 1102.16)
Requires the disclosure of known lead-based paint hazards upon sale of a property.

Lead-Safe Schools Protection Act
(California Education Code 32240 to 32245)
Implements a lead poisoning prevention and protection program for California schools to survey and ascer that predict lead contamintaion in public schools. Establishes guidelines for notification and advisement re findings, utilzation of state certified workers for activities to remediate lead-hazards and prohibits the use o sources of lead contamination in public schools.

Lead-Related Activities in Construction Work
(California Labor Code 6716 to 6717)
Provides for the establishment of standards that protect the health and safety of employees who engage in construction work, including construction, demolition, renovation and repair.

Lead in Children's Toys
(California Health & Safety Code 108550 to 108585)
Prohibits the manufacture, sale or exchange of toys with lead content in excess of the amount permitted by regulations.

Occupational Lead Poisoning Prevention
(California Health & Safety Code 105185 to 105197)
Establishes an occupational lead poisoning prevention program to register and monitor laboratory reports c toxicity cases, monitor reported cases of occupational lead poisoning to acsertain lead poisoning sources, investiagtions of take-home exposure cases, train employees,and health professionals regarding occupatic poisoning prevention, and recommended means for lead poisoning prevention.

California Lead Poisoning Prevention Regulations

Title 17
California Code of Regulations, Section 35001 et seq.
Accreditation of training providers & interim certification of individuals engaged in lead-related construction

Title 8
California Code of Regulations, Section 1532.1 et seq.

Department of General Services Home Page

California Department of Health Services

Recommended Lead Sample Collection Methods for Public Schools

Sample Inventory Forms
- Interior
- Exterior

The following is recommended guidance to schools for the purpose of testing school drinking water for the presence of lead. The testing is being carried out pursuant to Section 52 (b) of Senate Bill 1564, Chapter 330, Statutes of 1998. It is important that all drinking water samples be analyzed by a laboratory that is certified by the Department of Health Services. A list of laboratories certified to conduct lead analysis is available on the Department of Education Web Site.

In 1986, lead solder was banned from use in drinking water plumbing systems. Therefore, school buildings that were constructed prior to 1986 and which were plumbed with copper pipe, should receive the highest priority for sampling. ***Schools constructed after 1986 should also be tested.***

1. All tap samples for lead (except for lead service line samples) should be collected in accordance with this **guidance** and should be first draw samples (i.e., the first water to flow out of the tap). See Item (4), below, for directions for sampling lead service lines. First draw samples should have stood motionless in the plumbing system of each sampling site for at least six hours.

2. Each first draw tap sample for lead should be one liter in volume. Samples should be collected from a representative sampling of all sources of drinking water that are available for use by students (e.g., drinking fountains, bathroom sinks, cafeteria sinks and drink preparation equipment). Samples should be collected from each of the buildings on the school property frequented by students. At least one sample should be taken from each type ***and model*** of ***interior and exterior*** drinking fountain. ***In addition, samples should be taken from all exterior drinking fountains not attached to buildings***. ***Sample inventory forms are enclosed to assist with identification of the number of samples needed to meet these requirements.***

3. Samples may be collected by school employees who have been instructed on the sampling procedures specified in this paragraph, or by trained personnel from a certified laboratory. To avoid problems of employees handling nitric acid, acidification of first draw samples may be done up to 14 days after the sample is collected. If the sample is not acidified immediately after collection, then the sample must stand in the

original container for at least 28 hours after acidification.

4. ***Check with the public water system serving each school to determine if there are any lead service lines.*** If the school has any lead service lines from the public water system, the water in each such service lines must also be sampled. Each service line sample should be one liter in volume and have stood motionless in the service line for at least six hours. Lead service line samples should be collected in one of the following ways:

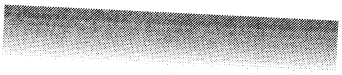
    i. From the water tap nearest the service line after flushing the volume of water between the tap and the lead service line. The volume of water should be calculated based on the interior diameter and length of the pipe between the tap and the lead service line; or

    ii. From a dedicated sample tap made directly into the lead service line.

5. If any sample exceeds 15 ppb, follow-up samples should be taken to confirm initial results. The school should collect each such sample from the same sampling site from which it collected a previous sample. If, for any reason, the school cannot draw water from the initial sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.

The public water system serving the school should also be contacted to obtain information on the levels of lead in the water delivered to the school. This information is important to determine the levels of lead that are contributed by the school plumbing and fixtures.

If you have any questions on school district operations you can contact Jack Rudd, CBO Ceres USD - e-mail: jrudd@ceres.kiz.ca.us . For questions on the sampling method you can contact David Spath, Department of Health Services - e-mail: dspath@dhs.ca.gov.



DELAINE EASTIN
State Superintendent of Public Instruction

CALIFORNIA
DEPARTMENT
OF
EDUCATION
721 Capitol Mall
P. O. Box 944272
Sacramento, CA
94244-2720

February 1, 2000

To: County and District Superintendents
Directors of Maintenance and Operations

LEAD-SAFE SCHOOLS GUIDE

Enclosed is a copy of the state's *Lead-Safe Schools Guide*, developed to assist school districts in controlling the lead hazards in their schools. A 1998 study conducted by the California Department of Health Services found nearly 96 percent of California elementary schools have detectable levels of lead in the paint, including schools built as recently as 1992. The study also found lead in the drinking water at some schools and in the soil around older school buildings.

California schools are required to use lead-safe work practices under several laws and regulations (both state and federal). Failure to comply with these various requirements can raise legal and liability issues for a school district. But, much more importantly, following the law provides an opportunity to protect school children and employees from hazards of lead poisoning.

To help districts meet these requirements, the California Department of Education, the Department of Health Services, U.C. Berkeley, and several school district personnel have been working together to establish the **Lead-Safe Schools Project.** This project represents a statewide effort to provide school districts with information and training about lead. The project offers schools free of charge:

- The *Lead-Safe Schools Guide*
- Videotape and training curriculum for use in training maintenance and custodial staff.
- Regional training programs for representatives from each school district on how to teach the curriculum to maintenance and operations staff.
- An informational hotline for schools that implement a lead-safe school program.

I urge your office to support your maintenance and operations departments so that they can take advantage of this valuable opportunity. Together, I know we can continue to work towards making California's public schools a safe and healthy place.

For more information about project activities and materials, call the **Lead-Safe Schools Project** at (888) 873-LEAD.

Sincerely,

DELAINE EASTIN
State Superintendent of Public Instruction

DE:a

Enclosure (available from the California Department of Health Services)

Lead-Safe Schools

LABOR OCCUPATIONAL HEALTH PROGRAM
UNIVERSITY OF CALIFORNIA AT BERKELEY

PROJECTS

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COEH

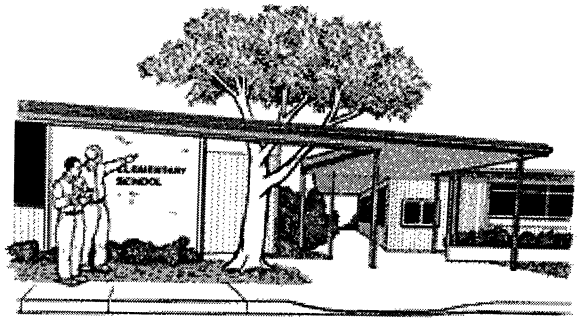
A program of the Center for Occupational and Environmental Health

School of Public Health

Training and Resources for School Maintenance Staff

Hotline (888) 873-LEAD

LOHP's Lead-Safe Schools Project offers training, publications, and a toll-free telephone hotline for California school districts and staff. There is lead in most California elementary schools, especially in paint, and it can be a serious hazard for both workers and children.



New Feature: Frequently Asked Questions (FAQs). Click here.

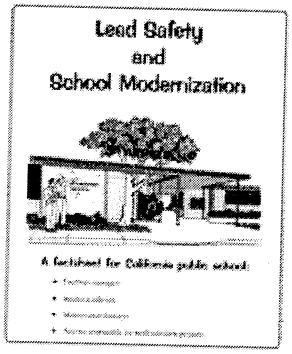
Training

We present free "training of trainers" sessions for representatives from each California school district. Local trainers then use our *Lead-Safe Schools Curriculum* (see below) to conduct workshops for maintenance workers in their districts.

For other information on our training programs, e-mail Project Assistant Donna Iverson: driver@uclink.berkeley.edu. You may also call the lead hotline at (888) 873-LEAD.

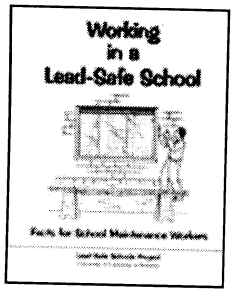
For Training Schedule, click here.

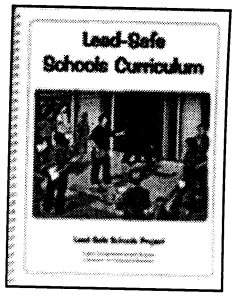
Publications

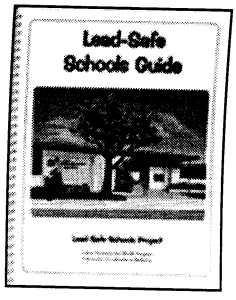


New! *Lead Safety and School Modernizatic* is a 12-page factsheet for facilities managers, business officials, maintenance directors, or anyone responsible for modernization projects in California public schools. It explains state regulations that apply when planning and implementing any major project that may create potential exposure to lead.

You can read or print the factsheet online. Click the picture or click here. Phone the lead hotline at the number above for information on obtaining free printed copies.







Working in a Lead-Safe School is a 28-page booklet for school maintenance workers. It was developed by LOHP and the Childhood Lead Poisoning Prevention Branch of the California Department of Health Services. In clear, non-technical language, it explains how lead in schools can pose a hazard for both workers and children. The booklet covers the effects of lead on the human body, lead regulations and safe work practices that can help keep the hazard under control. Available in both English and Spanish.

You can read or print the booklet online in English or Spanish. Click here. Phone the lead hotline at the number above for information on obtaining free

printed copies.

Our *Lead-Safe Schools Curriculum* can be used to train school maintenance workers and custodians about lead hazards and safe wo practices. The 5-hour curriculum includes lesson plans, overheads, an student handouts. The curriculum is accompanied by a new 8-minute videotape, *Lead: The Invisible Threat.*

The Curriculum is available to school districts, schools, maintenance managers, and supervisors. Phone the lead hotline at the number above for information.

Our 172-page *Lead-Safe Schools Guide* is a complete reference manual with background information on lead in schools. It covers lead hazards, safe work practices, details of state and federal regulations, and how school districts can create a lead-safe schools program.

The Guide is available to school districts, schools, maintenance managers, and supervisors. Phone the lead hotline at the number above for information.

All the above materials are available in the *Lead-Safe Schools Kit*, which is distributed to participants in our training programs.

Hotline

Our telephone hotline answers lead questions for administrators, supervisors, and workers in California public elementary schools and schools with childcare centers. Phone (888) 873-LEAD.

Is There Lead in California Schools?

Yes. It has been known for a long time that many children are exposed to lead at home. But new evidence shows that they may also get exposed at school. A recent study by the California Department of Health Services found that there is lead in most elementary schools in the state.

Lead is found in the paint in nearly 96% of school buildings, even some newer buildings. There is also lead in some drinking water, and in the soil near older school buildings.

The Lead-Safe Schools Project can help California elementary schools and schools with childcare centers create a safer school environment for children and staff.

Who Is At Risk?

Lead poisoning is the most common environmental health problem affecting young children. The most vulnerable children in schools are those in second grade and below.

School maintenance workers also may be exposed if precautions aren taken to control lead dust. They can even expose their families if lead dust travels home on their clothes.

Lead damages the brain, nervous system, and kidneys. Poisoning can occur gradually, and there are often no obvious symptoms. Even at low levels, lead can cause learning difficulties, behavior problems, and lower IQs in children.

How Can Schools Protect Children and Staff?

Lead poisoning is preventable if lead-safe policies and procedures are followed. School districts should:

- Evaluate lead hazards in paint, soil, and water. Lead paint is usually not a hazard if it is in good condition. However, lead dust may be created when surfaces are damaged or prepared for repainting.
- Assume surfaces that have been painted prior to 1992 have leac paint, and follow recommended lead-safe work practices.
- Give first priority to young childrens' classrooms and play areas.
- Make sure custodians and maintenance staff are properly trainec in lead-safe work practices.
- Provide staff with the tools and equipment they need to work safely.
- Never allow parents, other volunteers, or untrained staff to perform any task that might disturb lead.
- Prohibit tasks that create uncontrolled lead dust or chips (for example, sanding, burning, dry scraping, or water blasting).
- Allow high risk lead projects, and abatement projects designed tc reduce lead hazards for a minimum of 20 years, to be done only by staff or contractors who are certified by the California Department of Health Services.

The Lead-Safe Schools Project is a joint effort of U.C. Berkeley's Labor Occupational Health Program, the Childhood Lead Poisoning Prevention Branch of the California Department of Health Services, and the California Department of Education.

Hotline (888) 873-LEAD

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Projects (Main Page)

LOHP Home

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Berkeley, CA 94720-5120

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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

May 4, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
United States Environmental Protection Agency
Office of Water
Washington, DC 20460

Dear Mr. Grumbles:

I share your concerns with respect to protecting children from exposure to lead in drinking water at schools and daycare facilities.

My staff in the Drinking Water Division (DWD) have always prioritized Non-Transient Non-Community (NTNC) schools and daycare centers because of the sensitive sub-populations served at these public water systems. My staff in coordination with the Department of Public Health (DPH) Daycare Licensing staff have implemented procedures which afford children protection well beyond the EPA requirements of the current Lead and Copper Rule at Connecticut's licensed daycare centers.

The DWD currently regulates 195 daycare centers in Connecticut as NTNC public water systems. Lead exceedances have been issued to 17 NTNC daycare centers since January 1, 2002 and all are in various stages of achieving compliance under the requirements of the Lead and Copper Rule. Additional procedures coordinated through the DPH Daycare Licensing staff require daycare centers to provide an approved bottled water source as a condition of their continued licensure until the exceedance is resolved. Daycare Licensing actually institutes the bottled water requirement for a Maximum Contaminant Level (MCL) violation of any regulated drinking water contaminant until the violation is resolved.

DPH Daycare Licensing licenses 1400 additional daycare centers which are served by community public water systems across Connecticut. A lead test is required from each of these 1400 centers every two years as part of the license renewal process. Any sample which exceeds 15 parts per billion (ppb) is forwarded from the Daycare Licensing Specialist to my Drinking Water Division Compliance Staff for investigation. My compliance engineers indicate that usually less than 10-15 elevated lead referrals from daycare centers on community public water systems need to be investigated each year out of approximately 700 centers which have licenses renewed. These elevated lead referrals are investigated jointly with a community public water system representative and are usually easily resolved with proper sample collection and/or minor plumbing modifications or fixture replacement. These centers are also required by Daycare Licensing to provide an approved bottled water source until the situation is resolved as a condition of continued licensure.

Phone: **(860) 509-7333**
Telephone Device for the Deaf: (860) 509-7191
*410 Capitol Avenue - MS #*51WAT
P.O. Box 340308 Hartford, CT 06134

The Drinking Water Division currently regulates 205 schools with on-site water supply systems; 175 are classified as NTNC public water systems and 30 as Community public water systems. Lead exceedances have been issued to 15 NTNC public water system schools and one community public water system school since January 1, 2002. These systems are in various stages of achieving compliance under the requirements of the Lead and Copper Rule including several in full compliance either through treatment installation, a connection to a community public water system, or the construction of an entirely new water system under a special capacity project undertaken for Connecticut's public schools.

The Drinking Water Division instituted the capacity project for Connecticut's schools in late 2002 at which time all schools were subject to a complete sanitary survey. The school surveys detailed not only all Connecticut Public Health Code violations, but also detailed all system infrastructure deficiencies which could affect either water quality or quantity. The Drinking Water Division coordinated with the Connecticut Department of Education to obtain funding for these much needed improvements to schools with on-site water systems.

There are 833 other schools across Connecticut, which are served by Community public water systems as customers. No consistent or coordinated sampling event for lead at these schools has occurred since 1988-89 when the Lead Contamination Control Act was implemented. Some daycare centers are located within schools so a limited amount of data is available from DPH daycare licensing renewals, but current data is not available for the majority of schools served by Community public water systems. The best method for EPA to work collaboratively with States is to implement a voluntary program of education directed at school administrators and community public water systems and to provide grant money to primacy programs to cover costs associated with technical assistance and laboratory costs. With grant money to cover costs associated with such a large project, I could then determine my best approach to collect this data in an accurate and consistent manner. Options would be authorizing additional hours for my own Drinking Water Division staff or contracting out with local health departments or DPH approved environmental laboratories. Consideration should also be given to providing federal grants to schools to replace lead in their plumbing or to upgrade existing systems.

Thank you for the opportunity to comment on this important public health matter and to share with you what Connecticut has already done to improve conditions at our schools and daycare centers.

Sincerely,

Gerald R. Iwan, Ph.D
Director
Drinking Water Division

GRI/ems

Cc: Dr. J. Robert Galvin, Commissioner, DPH
Richard Edmonds, Acting Bureau Chief, DPH
Robert Varney, EPA, Region I Administrator
Jane Downing, EPA Region I
Arthur Rocque, Jr., Commissioner, DEP

DELAWARE HEALTH
AND SOCIAL SERVICES
OFFICE OF THE SECRETARY

April 28, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Grumbles:

Thank you for your recent letter regarding lead in drinking water and particularly lead exposure of children in schools and day care facilities. The Department of Health and Social Services, Division of Public Health, has worked closely with the Department of Education to inform schools of the requirements of the Lead Contamination Control Act (LCCA) of 1988.

The Division of Public Health, Office of Drinking Water, has continued to enforce monitoring under the Lead/Copper Rule (LCR) for all schools and day care facilities that have their own water system. We have made a big effort in the last two years to ensure that all public water systems are in compliance with the monitoring requirements of the LCR.

In light of the recent events in Washington, DC, we have begun an effort to remind all schools and day care facilities of the requirements of the LCCA. We are in the process of sending them a packet of information which includes information on the water fountains that were known to have used lead in their construction as well as information on how to further reduce children's exposure utilizing information provided by EPA.

If you have any further questions please feel free to contact Kevin Charles, Section Chief, Health Systems Protection, at (302) 744-4739.

Sincerely,

Vincent P. Meconi

Vincent P. Meconi
Secretary

VPM:lj

F:\VPM\DPH\Grumbles response letter 042604.doc

Department of
Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

April 30, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator, Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your March 18 letter regarding the monitoring of lead in drinking water at schools and day care facilities, and for your note of congratulations. I, too, look forward to working with you.

I understand that you have also written to the Florida Department of Health (DOH) on this same issue. This is certainly appropriate because, while the Florida Department of Environmental Protection (DEP) is the lead agency in Florida responsible for administering the federal and State Safe Drinking Water Acts (SDWAs), the DEP has an interagency agreement with the DOH authorizing the DOH to fully implement all aspects of the SDWAs in ten of Florida's larger counties. The DOH also has sole responsibility for Florida's "children and family" initiatives. Therefore, the DOH's separate response to your letter should complement the DEP's response in explaining Florida's overall efforts to protect schoolchildren from exposure to lead in drinking water.

From 1988 to the mid-1990s, the DEP implemented the federal Lead Contamination Control Act (LCCA). We successfully received 100 percent cooperation from all of Florida's 67 counties and their school districts in this voluntary program aimed at removing all lead pipes, faucets, and water fountains (i.e., water fountains with lead-lined reservoirs). This work has essentially been completed.

In 1993, the DEP adopted the federal Lead and Copper Rule with two significant and important improvements. First, we added day care facilities to the definition of Tier 1 sampling sites and, thus, made Florida's youngest citizens a priority in our lead and copper sampling strategy. Secondly, we require that all regulated water systems must notify each customer whose individual sample result for lead exceeds the lead action level. It appears that such public notification of individual customers did not take place in Washington, DC. Finally, after we completed a review of the initial sample results under the Lead and Copper Rule, we directed our technical service contractor, the Florida Rural Water Association, to assist the more than 300 smaller community or non-transient non-community water systems in installing corrosion control treatment, or otherwise optimizing treatment, to come into compliance with the Lead and Copper Rule.

Florida's cities, unlike many northern cities such as Chicago and Washington, are relatively new, and therefore, most water main construction occurred after the time (early in the last century) when lead pipe was used for construction of water service lines. Florida's construction industry has relied mostly upon copper, plastic, and steel as the materials of choice for water service lines. Additionally, when about 25 percent of Florida's regulated water systems initially exceeded the lead or copper action level (about ten percent exceeded the lead action level and about 15 percent exceeded the copper action level) following DEP's adoption of the Lead and Copper Rule, the vast majority of the systems were able to quickly bring their lead and copper levels under control. This was done within standards by adding an orthophosphate inhibitor to their water and adjusting the pH of their water. We understand that the Washington, DC water system was prohibited from using an orthophosphate inhibitor and relied upon simple pH adjustment.

I hope this information, along with the information provided by the DOH, is useful to you, and demonstrates that Florida has recognized the importance of protecting schoolchildren from exposure to lead in drinking water. If you would like further information or would like to discuss this issue further, please contact Van Hoofnagle, P.E., Administrator of the DEP's Drinking Water Program, at (850) 245-8631, or van.hoofnagle@dep.state.fl.us, or at the letterhead address.

Sincerely,

Colleen M. Castille

Colleen M. Castille
Secretary

CMC/vh/m

cc: Dr. John O. Agwunobi, DOH
Mimi Drew, DEP
Van Hoofnagle, DEP

FLORIDA DEPARTMENT OF HEALTH

Jeb Bush
Governor

John O. Agwunobi, M.D., M.B.A.
Secretary

April 20, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue Northwest
Washington, District of Columbia 20460

Dear Mr. Grumbles:

Thank you for your letter of March 18, 2004, inquiring about Florida's activities addressing lead in drinking water at schools and day care facilities. Florida has proactive programs to evaluate lead content in drinking water, and works to actively identify and protect children from lead exposure in the environment.

The Florida Department of Health shares a role in implementing the Federal Safe Drinking Water Act (SDWA) with the Florida Department of Environmental Protection (DEP), with the DEP possessing state primacy. In implementing the federal rules to control lead and copper, Florida has added schools and day care centers to the definition of Tier 1 lead and copper sampling sites. Schools are thus given first priority in our sampling strategy to assess the presence of unsafe levels of lead in their drinking water supplies. Also, for those public water systems that exceed the 90th percentile for lead in their drinking water, public notification to all schools within the utility's service area is required.

During the period from 1988 through 1991, Florida uncovered a major source of lead in school drinking water. Drinking water fountains containing lead components were identified as a major contributor of high lead levels in the water. These fountains were removed and replaced with newer, Lead Contamination Control Act compliant models. Since that time period, the state has not had any significant lead in drinking water. It does not have problems associated with the presence of lead water service lines, and those utilities that in the past did exceed the lead action level, have since taken action to control the corrosivity of their drinking water, and have returned to compliance. Since 1993, the Florida Rural Water Association has provided assistance to many small utilities in optimizing their corrosion control, and complying state water quality standards. Furthermore, In Broward County, the Broward County School Board has taken an ambitious approach in controlling lead content in school drinking water supplies; with a proposal to monitor all schools for lead on an annual basis.

Florida has also established a lead maximum contaminant level (MCL) of 15 micrograms per liter at the point of entry for all community and non-transient non-community public water systems. Applicable public water systems are therefore required to monitor for lead within the water distribution system and comply with the 15 microgram per liter action level (AL), as well as monitor at the point of entry for the lead MCL.

Florida has a unique statewide regulatory program to evaluate the lead levels in the drinking water provided by limited use public water systems (water systems below the threshold of the Federal SDWA). In implementing this program, the Florida Department of Health is able to evaluate the lead content in day care establishments and small schools that have their own onsite water systems, but that would not be covered by the Federal SDWA. In several instances, the program has allowed the state to identify excessive lead levels in drinking water, and take action to eliminate the potential risks for consumers.

In summary, the State of Florida will continue to take an assertive role in protecting children from exposure to lead in drinking water at schools and day care facilities. The Florida Department of Health is committed to the protection of all residents and visitors from lead exposure, and will continue to take those actions necessary to accomplish this goal. If you desire any additional information, please feel free to contact Mr. Bart Bibler, Bureau Chief of Water Programs, at (850) 245-4241.

Sincerely,

John O. Agwunobi, M.D., M.B.A.
Secretary, Department of Health

JOA/eb

DHR

Maria Greene, Acting Commissioner

Georgia Department of Human Resources • Division of Public Health • Kathleen E. Toomey, M.D., M.P.H., Director
2 Peachtree Street NW • Suite 15.470 • Atlanta, Georgia 30303-3142
404-657-2700 • FAX: 404-657-2715

April 2, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

Dear Mr. Grumbles:

This letter is in response to your correspondence dated March 18, 2004 regarding efforts to protect children from exposure to lead in drinking water at schools and day care facilities.

Within the Department of Human Resources Division of Public Health, the Childhood Lead Poisoning Program does not currently include a program to address lead exposure from drinking water. None of the Elevated Blood Lead investigations have ever identified drinking water as the potential source of lead. In addition, both ground and surface water supplies in Georgia are generally non-corrosive and would not leach lead from service lines and soldered joints.

The Georgia Department of Education Facilities Services Office advises me that when schools are renovated, they are assessed for the presence of lead and other hazardous materials, but that lead in drinking water has never been found in the course of those assessments.

I commend you for your work in the area of lead poisoning prevention and hope this information is helpful in your review of state and local efforts. If you need any additional information, please contact Mr. Michael Smith, Director of the Environmental Health and Injury Prevention Branch, at 404 657-6534.

Sincerely,

Kathleen E. Toomey, M.D., M.P.H.
Director
Division of Public Health

KET:fjr

c: Maria Greene
Mike Smith

Georgia Department of Natural Resources

2 MLK, Jr. Drive, S.E., East Floyd Tower, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Carol A. Couch, PhD., Director
Environmental Protection Division

April 8, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Ground Water and Drinking Water
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: Your letter dated March 18, 2004

Dear Mr. Grumbles:

This is in response to your recent letter requesting information about the state's implementation of the "Lead Contamination Control Act of 1988 (LCCA), PL-100-572" to reduce exposure of children to lead contaminated drinking water in public schools in Georgia.

Please be aware that, in Georgia, the LCCA program for Lead in school drinking water is a separate program from the Lead and Copper Rule, which regulates the lead in public water supply systems under the Safe Drinking Water Act (SDWA). Georgia Department of Education is the lead state agency for the LCCA program in public school systems. Georgia Department of Human Resources is the lead state agency for the day care centers. In 1989, the Governor's Office assigned the LCCA responsibility to those agencies, while the state Environmental Protection Division retained the Lead and Copper Rule responsibility for the public water systems in Georgia.

According to our information, the following events have taken place to control lead in school drinking water:

1) On April 14, 1989, Associate State Superintendent Mr. H. F. Johnson informed all superintendents and RESA Directors about the Lead Contamination Control Act that the President signed on October 31, 1988, and the required programs to reduce the exposure of lead-contaminated drinking water for school children. He provided background information, cooler model numbers, and guidance.

2) On June 5, 1989, Associate State Superintendent Mr. H. F. Johnson sent information to all local education agencies (LEAs) about the Lead Contamination Control Act that included information for testing and determining the source and degree of lead contamination in school drinking water supplies, plumbing profile, along with certain remedies for such contamination.

   Mr. H. F. Johnson informed all LEAs that they are responsible for testing and remedying lead contamination in drinking water coolers and other sources. The copies of the results of any testing were required to be made available in the administrative office of the LEA for inspection by the public, school personnel, and parents. The LEAs were also required to notify parents, teachers and employee organizations of the availability of such testing results.

   Mr. H. F. Johnson ordered that by January 1990, all water coolers identified with serial numbers of the published list must be repaired, replaced, permanently removed, or rendered inoperable unless the cooler is tested and found to contain no lead.

3) On February 15, 1990, Associate State Superintendent Mr. Hall Rogers provides all local education agencies (LEAs) a list of models and serial numbers identifying water coolers that must be repaired, replaced, permanently removed, or rendered inoperable unless the cooler is tested and found to contain no lead. He recommended all coolers be tested.

4) On May 24, 1990, Associate State Superintendent Mr. Hall Rogers informed local education agencies (LEAs) about water cooler recalls and providee information about the requirement for the manufacturers of drinking water coolers that have been identified by USEPA as having lead-lined water cooler tanks to repair, replace, or recall them and provide a refund for such coolers.

5) On September 5, 1991, Associate State Superintendent Mr. Hall Rogers reminded all local education agencies (LEAs) about the requirements of LCCA and tells them to test, render inoperable, or replace coolers that contain lead components. He provided the LEAs the information about how to obtain free replacement parts for coolers with identified serial numbers.

6) On February 17, 1992, Associate State Superintendent Mr. Hall Rogers informed the state Environmental Protection Division about the activities that the Department of Education had performed pursuant to Lead Contamination Control Act (LCCA) of 1988:

   a) Six (6) environmental workshops were conducted dealing with LCCA across the state of Georgia. 113 LEAs had representation at these workshops.

   b) Twenty-six (26) individual consultation meetings with LEAs have taken place.

   c) Every school in Georgia has been visited by a Georgia Department of Education environmental specialist and all relevant LCCA questions were addressed.

   d) Hundreds of telephone calls from LEAs have been received and questions answered. Advice on cooler manufacturers, testing procedures, and lab analysis costs were given to LEAs, along with a list of qualified commercial labs.

   e) Georgia Department of Education surveyed all LEAs to determine those schools that may not be in compliance with LCCA.

   f) In addition to the public schools, all above referenced information was distributed to 550 private schools and to the Department of Human Resources day care program director.

The above outline offers a brief summary of the efforts that were made on this subject. Should you require additional information, please contact State Superintendent of Schools, Ms. Kathy Cox at 2 MLK, Jr. Drive, Floyd Towers East, Suite 2066, Atlanta, Georgia 30334, Tel (404) 656-2800, FAX (404) 651-8737.

Should you have any other questions about the public water systems, please feel free to contact Brad Addison or Onder Serefli of my staff at (404) 656-4807 or (404) 656-2750.

Sincerely,

Carol A. Couch, Ph. D.
Director

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
EMD / SDWB

April 5, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

SUBJECT: STATE PROGRAMS TO CONTROL LEAD IN SCHOOL DRINKING WATER

Thank you for your letter informing us of the U.S. Environmental Protection Agency's continued concern for the protection of children from exposure to lead in drinking water at schools and daycare facilities. This letter responds to your request to the Hawai`i Department of Health for information concerning Hawai`i's efforts to further protect children from lead exposure through school drinking water.

The Hawai`i Department of Health shares the concern for the well being of our young people, and took steps early to identify possible lead exposure from school water coolers and distribution systems. In 1989, Department of Health worked with the Department of Education (DOE) to request water cooler information from all public schools and registered private schools and day care facilities as called for in the Lead Contamination Control Act (LCCA). For the public schools at that time, it was determined that water coolers were not generally available to the student population, but were only allowed in the administration buildings of the schools. These coolers were inventoried by the DOE and all coolers of the make and model numbers identified in the LCCA were removed from service. All private schools and day care centers which reported having the unacceptable water coolers were advised to discontinue their use and repair or replace the cooler.

In 1994, again working with the Department of Education, the Department of Health was able to set up a program of taking first flush and flushed (five-minute flush) samples for lead and copper from water taps in the cafeterias of each of the State's public schools. In general schools are served by public water systems that must comply with federal and State drinking water laws. Of the 233 schools which were tested, six schools (2.6%) had first flush samples that exceeded the LCCA action level of 20 µg/L, 31 (13.3%) showed detectable lead between 20 µg/L and 5 µg/L and 196 (84.1%) samples had no detectable level of lead. None of the 233 schools had flushed samples that exceeded 20 µg/L, four schools (1.7%) had flushed samples had detectable lead readings between 20 µg/L and 5 µg/L and 229 schools (98.3%) had flushed samples with no detectable level of lead. This information showed clearly that flushing is an effective means of addressing lead exposure problems. We have also found this to be true in individual homes and buildings because of the absence of lead piping here.

Additional sampling at each of the six schools that had first flush samples exceeding the LCCA action level of 20 µg/L was performed. Some of the schools showed marked improvement with a single resampling while two of the schools in particular required significantly more investigation to identify appropriate mitigation measures.

The Department of Health issues an advisory to the Department of Education to flush all school systems prior to the start-up of school every year, and if necessary, after vacations and weekends. The Department of Education currently uses a flushing recommendation in response to water quality complaints which they receive. A majority of these are caused by the observation of rust colored water from older galvanized distribution systems. The Department of Health continues to assist the DOE staff in responding to water quality complaints and issues when requested.

Based on the results of our school surveys, the inventorying of water systems, and our experience in water quality complaint response investigation, it is our understanding that lead service laterals have not been used in Hawaii. There is no other current program for reducing lead in school drinking water.

The Department of Health currently administers a Childhood Lead Poisoning Prevention Program which is funded by an annual grant from the Centers for Disease Control. Headed by our Family

Health Services Division, this effort calls together representatives from a number of health, environmental and other concerned agencies to address many avenues of lead exposure including drinking water, indoor air and toxics, public and private housing, dishware, food, and more. At one time, this program conducted statewide blood lead screening of children and identified and investigated "hot spots" of elevated blood lead. Overall, the program determined that Hawai`i has a relatively low incidence of elevated blood lead in children (approximately 1% of children tested). This program is currently active in public education (working with physicians and health care providers, and medical insurance companies), lends technical assistance to parents who have questions or who have had their children's blood lead level tested, and is involved in the development of potential legislative measures to help reduce childhood exposure to lead.

In terms of collaboration, EPA has done much by providing a method for the detection of lead in drinking water, an action level for drinking water in schools and guidance in the response to identified problems. If EPA wants to pursue the reduction of children's exposure to lead from school distribution systems, you will need to address the problem of the cost of remediating a lead exposure problem. In our experience with the sampling and testing of schools, this is the biggest obstacle in the process of lead reduction. The detection of the problem is fairly simple and cost effective. The solution of the problem, which falls on the school or daycare facility is the costly part of this program. This has been the real problem with the LCCA which ended up providing absolutely no funding (after projecting as much as $30 million nationally would be available). The private schools and daycare facilities are usually not prepared to deal with the type of costs involved.

Hawai`i has been very fortunate in that we have found very few schools with potential exposure problems and solutions which were easy to implement. However, at some points during the process, it appeared that the only solution would be distribution system replacement. We would like to see the EPA: 1) work toward making funding available for repairs related to school replacement of water distribution systems and 2) identify cost effective means of remediating a problem.

As with other state departments of health or environment, our Department is involved in a number of other specific programs to limit lead exposure to the general populace such as lead in paint, lead in dishware, proper handling and disposal of leaded

materials, lead in air emissions, lead in foods, lead in drinking water and rain-water catchment systems, and more. I hope this information fulfills your request. Should you have further questions concerning lead and drinking water, please contact Melvin Hamano of our Safe Drinking Water Branch at (808) 586-4258.

Sincerely,

Chiyome Leinaala Fukino, M.D.
Director of Health

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

April 28, 2004

Benjamin H. Grumbles
EPA Office of Water
1200 Pennsylvanian Avenue
Washington, D.C. 20460

Dear Mr. Grumbles:

This is in response to your March 18, 2004 request for information about state and local efforts to protect children from exposure to lead in drinking water. Idaho has received primacy and implemented both federal rules that protect the public from lead in drinking water. We promulgated and implemented the Lead Ban in 1988 followed by the Lead Copper Rule in 1992.

Lead Ban:

In the spring of 1988, Idaho adopted the version of the *Uniform Plumbing Code* that limits lead content in plumbing materials in conformance with the Lead Ban. In June of 1989, Idaho's governor designated Idaho's Superintendent of Public Instruction as the primary contact for developing and managing a program that assists local education agencies in testing for and remedying lead in drinking water. In August of 1989, public and private schools along with daycare centers were mailed letters asking them to take precautions against stagnant water that might contain lead until they could test their water. With the letters, they were also furnished the EPA booklet entitled *Lead in School Drinking Water* and a list of water cooler models that could contain lead lined tanks. They were advised to replace any coolers with lead lined tanks immediately.

Lead Copper Rule:

In 1992, the Idaho Division of Environmental Quality (now a department) adopted and implemented the US EPA's Lead Copper Rule. Initial high lead results in Idaho schools were primarily from water that had been stagnant during summer vacation. In most cases, additional samples collected with stagnation times more representative of possible exposure were well below the action level. The few remaining schools with levels above the action level have either already installed treatment or are in the process of correcting the problem. In the meantime, these schools are flushing the water lines each morning to ensure that the water children drink does not have enough time to absorb unhealthful levels of lead.

If you need further information, please contact Howard Woods. His phone number is 208-373-0275 and e-mail is hwoods@deq.state.id.us. If there is anything else I can do to be of assistance, please let me know.

Sincerely,

C. Stephen Allred
Director

TH/hw/km

c: Deb Stage, Idaho Department of Education
Kara Stevens, Idaho Department of Health and Welfare

IDAHO DEPARTMENT OF
HEALTH & WELFARE

DIRK KEMPTHORNE - Governor
KARL B. KURTZ - Director

OFFICE OF THE DIRECTOR
450 W. State Street, 10th Floor
P.O. Box 83720
Boise, ID 83720-0036
PHONE 208-334-5500
FAX 208-334-6558

April 16, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave, N.W.
Washington D.C. 20460

Dear Mr. Grumbles:

This is in response to your letter dated March 18, 2004, regarding state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and daycares. The Idaho Department of Health and Welfare does not address lead in drinking water, however, we have been in touch with the Idaho Department of Environmental Quality, Water Quality Program, and they are preparing a response to your letter describing their efforts.

If you have any questions, please contact Kara Stevens, Acting Manager, Environmental Health Unit, Bureau of Community and Environmental Health at (208) 332-7319 or stevensk@idhw.state.id.us.

Sincerely,

Joseph R. Bruneau

For KARL B. KURTZ
Director

KBK/kls
lbgrumbles4-16-04

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/785-4787

APR 20 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
Washington D.C. 20460

Dear Mr. Grumbles:

Thank you for your request for input on this important matter. The purpose of this letter is to reply to your request concerning state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities, and to share information about the United States Environmental Protection Agency's (U.S. EPA) efforts to date in this area. Further, you requested our input on how you see U.S. EPA working collaboratively to further the state's efforts to implement this voluntary program. One of the prompts for this information is the seriously elevated levels of lead being found in homes in Washington D.C. that has been in the national spotlight.

This letter is a coordinated response with the Illinois Department of Public Health (IDPH). Illinois Environmental Protection Agency (EPA) and IDPH have implemented various programs under our respective jurisdictions and authorities to provide a safe and adequate supply of drinking water through public water supplies. In particular, our public education efforts have taken special steps to protect children from exposure to lead in drinking water as detailed below. Additionally, in response to your request for our input in regard to U.S. EPA's collaborative role to assist our efforts to implement this voluntary program, the Illinois EPA concurs with your conclusion that this situation is unique to the District. As such, we recommend that your most effective role will be to continue to provide technical assistance documents for states to utilize.

Illinois has not observed any elevation in lead or copper levels in public water supplies similar to those that occurred in Washington, D. C. The drinking water permit program carefully reviews all proposed changes to water treatment within individual water supplies to ensure that treatment changes will not adversely impact existing treatment benefits already in place, as required by the lead and copper rule. Further, the Illinois Plumbing Code prohibits the direct joining or connection of dissimilar metals, thus preventing any galvanic corrosion problems. Both lead and copper samples and water

quality samples are required to document continued compliance with the lead and copper regulation.

The Illinois EPA is the primacy agency responsible for implementing and enforcing the federal Safe Drinking Water Act (SDWA) and regulations including the Lead and Copper Rule (LCR) that applies to public water supplies. The Illinois EPA has delegated the responsibility of administering the regulation of non-community public water supplies under the SDWA to IDPH.

As you are aware, the federal SDWA was amended in 1986 to prohibit lead solder, pipes and flux, and to control the level of copper in drinking water. The treatment technique of corrosion control was selected to ensure that safe levels are present in drinking water. Compliance is based upon meeting a 90th percentile level of 0.015 mg/l of lead and 1.3 mg/l of copper, calculated using a specific number of samples required, based upon the number of consumers served by each public water supply. Existing public water supplies were required to meet these action levels. New public water supplies are also required to utilize the same sampling protocols and comply with these action levels. *Mandatory public education on lead and copper was required to be issued by every public water supply in each State.* Special distribution of materials was provided to schools, daycare facilities, pediatricians, and other locations where children and expectant mothers might expect to consume water. Illinois achieved 100% compliance with this requirement.

The LCR established strict sampling requirements for community public water supplies that include specifics regarding the type of buildings to be sampled. Target sampling sites include 3 tiers: 1) single family structures with lead service lines, or single family structures with copper pipes soldered with lead solder installed after 1982, or single family structures with lead pipes; 2) single and multi-family structures served by lead service lines, or single and multi-family structures that contain copper pipes soldered with lead solder installed after 1982, or single and multi-family structures that contain lead pipes; or 3) single family structures that contain copper pipes with lead solder installed before 1983. The number of sampling sites to be used was dictated by population; as many sites as possible were required to be taken from tier 1, with the remaining number from tier 2, or if necessary, tier 3. Schools and daycare centers were not included in this required target sampling pool. It is unlikely that community public water supplies have any data specific to schools or daycare centers.

Prior to the first compliance-monitoring period (January through June 1992) for the LCR, the Illinois EPA held a series of outreach seminars on the LCR geared toward water supply operators, and included lead and copper corrosion control in our Class C, B, and A drinking water operator certification examinations.

In response to lead action level exceedances in community water systems (CWS), the Illinois EPA implemented a public education program that: 1) Sends action level exceedance notification letters along with a schedule including compliance requirements and mandatory deadlines; 2) Requires community water systems that exceed the "lead" action level, to deliver a "public education program" within 60 days of exceeding the

action level, and requires the system to repeat the entire program on an annual basis; and 3) Requires the electronic portion of the program to be repeated every six-months for systems that serve greater than 3,300 persons.

The "public education program" administered by Illinois EPA requires CWS to utilize:

- **Electronic Media** - CWSs must send or deliver the public service announcement to at least 5 radio and television stations (with the largest audiences) every six months (applicable to only those systems that serve >3,300 persons);
- **Utility Bill / Pamphlet** - The CWSs must insert a public education pamphlet every 12 months into each customer's water utility bill (including schools and day care facilities) containing the information described in Appendix F. The system must also print in large type on their water bill the following statement: SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION; and
- **Printed Media** - CWSs must deliver the printed public education pamphlet to local newspapers and community organizations every 12 months:
  - Printed materials (pamphlets) must be submitted to the editorial department of major daily and weekly newspapers. The supply is not required to have the materials published in the newspaper but only submitted to the editorial departments; and
  - Public education brochures must be sent to the following institutions: **schools, school boards, health departments**, WIC and Head Start programs, hospitals and clinics, pediatricians, family planning clinics and welfare offices. A list of groups receiving the pamphlet must be submitted.

The Illinois EPA has modified the public notice template developed by U.S. EPA to be used when a CWS incurs a LCR violation (e.g., monitoring violations, water quality parameter excursions), and must issue public notice. This template is enclosed as in Attachment I. The template includes the following standard language: "*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, **schools, and businesses**). You can do this by posting this notice in a public place or distributing copies by hand or mail.*" (Emphasis added)

Under the Consumer Confidence Report (CCR) program administer by Illinois EPA, CWSs are required to include the following lead/copper information in their annual CCRs: lead and copper 90th percentile value from the most recent monitoring period (if detected); the total number of sites that exceeded the action level during the most recent round of monitoring (if any sites exceeded); and an informational statement must be included in the CCR if the lead level is above the action level in more than 5 percent, and up to and including 10 percent, of the homes sampled (only applies if the water supply collected 20 or more samples during its most recent round of monitoring). In other words, if the 95% percentile is above the action level but the 90% percentile is below the action level, CWSs must include this informational statement: "***Infants and young***

children are typically more vulnerable to lead in drinking water than the general population. *It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791)"* (Emphasis added)

The "Lead Contamination Control Act" (LCCA) was passed in 1988. This Act required lead contamination investigation and mitigation in all elementary and secondary schools, and all kindergarten and daycare facilities. One section of the Act required that all water coolers be sampled, and required installation of corrections to remove the lead or replacement of specific types of water coolers found to contain either lead liners or copper plumbing soldered with lead. U.S.EPA published and disseminated two documents, called "Lead in Drinking Water in Schools and Non-Residential Buildings", EPA 812-B-94-002 and "Sampling for Lead in Drinking Water in Nursery Schools and Day Care Facilities", EPA 812-B-94-003. These publications were distributed to every school and licensed day care facility by IDPH, who was responsible for compliance with this Act. The IDPH received a letter from U.S.EPA Region 5 on November 13, 1989, indicating that all requirements of the LCCA had been met, and commended them for their outreach efforts to educate regional staff, plumbing inspectors, and networking with local health departments.

I trust that this will meet your needs. Please contact Roger Selburg of my staff at 217/785-8653 or me should you have any additional questions or concerns.

Sincerely,

Renee Cipriano
Director

Water Quality Parameter (WQP) Treatment Technique Violation
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
[System] Fails To Meet Water Quality Parameter (WQP) Levels
Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation. As a result of past [lead and/or copper] levels in the water supply above the limit, or "action level", our system has installed optimal corrosion control treatment. This treatment adjusts the acidity, hardness, and/or phosphate levels to prevent [lead and/or copper] in the pipes from dissolving into the water. WQP samples we took during the [date] through [date] monitoring period show that corrosion control treatment is not maintaining [list WQP contaminants in which ranges were not met] at the levels required.
What should I do?
➢ **You do not need to use an alternative (e.g., bottled) water supply.** However, if you have specific health concerns, consult your doctor.
What does this mean?
This is not an immediate risk. If it had been, you would have been notified immediately. *However, infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.* **AND/OR** This is not an immediate risk. If it had been, you would have been notified immediately. *However, copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal physician.*
What happened? What was done?
[Describe corrective action.] For more information, please contact [name of contact] at [phone number] or [mailing address]. *Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.* This notice is being sent to you by [system]. Water System ID# _____ Date distributed _____

Illinois Department of
PUBLIC
HEALTH

Rod R. Blagojevich, Governor
Eric E. Whitaker, M.D., M.P.H., Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

May 18, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
United States Environmental Protection Agency
Office of Water
1200 Pennsylvania Avenue, NW
Washington D.C. 20460

Dear Mr. Grumbles:

This is in response to your letter of March 18, 2004, concerning state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and daycare facilities. Further, you requested input from the Illinois Department of Public Health (IDPH) about how U.S. EPA can work collaboratively to support Illinois' efforts to control lead in drinking water for schools and daycare facilities. The concern regarding this information is the seriously elevated levels of lead being found in homes in Washington D.C. that has been in the national spotlight.

This letter is a coordinated response with the Illinois Environmental Protection Agency (IEPA). The Department and IEPA have implemented various programs under our respective jurisdictions and authorities to provide a safe and adequate supply of drinking water through public water supplies. In particular, special steps in the area of public education have been taken to protect children from exposure to lead in drinking water as detailed below. Illinois has not observed any elevation in lead levels in public water supplies similar to those that occurred in Washington, D.C. Thus, the Department and IEPA concur with your conclusion that this situation is unique to the District. As such, we recommend that your most effective role will be to continue to provide technical assistance documents for states to utilize.

As you are aware, the federal Safe Drinking Water Act (SDWA) was amended in 1986 to prohibit lead solder, pipes and flux, and to control the level of copper in drinking water. The treatment technique of corrosion control was selected to ensure that safe levels are present in drinking water. Compliance is based upon meeting a 90th percentile level of 0.015 mg/l of lead and 1.3 mg/l of copper, calculated using a specific number of samples required, based upon the number of consumers served by each public water supply.

Existing public water supplies were required to meet these action levels. New public water supplies are also required to utilize the same sampling protocols and comply with these action levels. Mandatory public education on lead and copper was required to be issued by every public water supply in each State. Special distribution of materials was provided to schools, daycare facilities, pediatricians, and other locations where children and expectant mothers might consume water. Illinois achieved 100% compliance with this requirement.

IEPA is the primacy agency responsible for implementing and enforcing the federal Safe Drinking Water Act (SDWA) and regulations including the Lead and Copper Rule (LCR) that applies to public water supplies. The IEPA has delegated the responsibility for administering the regulation of non-community public water supplies, including schools and daycares with their own water system, under the SDWA to this Department. The Department regulates approximately 200 schools and daycares that are non-transient non-community (NTNC) public water supplies.

NTNC public water supplies are required to have a certified operator for each facility. The operator can be certified through a Department approved certification program or through the IEPA. The Department certification class covers corrosion control for lead and copper.

The LCR established sampling requirements for NTNC public water supplies. These requirements include specifics regarding the type of buildings to be sampled. Target sampling sites include 2 tiers: 1) buildings or additions identified as having copper pipes with lead soldered joints installed between January 1983 and May 1986, or contain lead pipes, and/or are served by a lead service line; 2) buildings or additions identified as having copper pipes with lead soldered joints installed before 1983. The number of sampling sites to be used was dictated by population; as many sites as possible were required to be taken from tier 1, with the remaining number from tier 2.

In response to a lead action level exceedance in a NTNC water system, the Department implemented a response procedure that: 1) Sent action level exceedance notification letters along with a schedule including requirements and mandatory deadlines; 2) Require NTNC water systems that exceed the "lead" action level to sample for the following water quality parameters: alkalinity, calcium, water temperature, pH, and conductivity; 3) Within 60 days, distribute copies of educational materials provided by the Department describing the hazards of lead in drinking water to all persons served by the water system and homes of students and children for schools and day cares; and 4) Within 6 months submit to the Department a corrosion control plan to reduce the concentration of lead and copper in the water supply.

The Department requires facilities to publicly post warning posters of all action level exceedances. For schools and daycares the Department recommends that each tap that children drink from be taken out of service until it can be resampled. The Department may further recommend that taps or water coolers exceeding the action level be permanently removed or replaced if the lead level continues to exceed the action level.

The Lead Contamination Control Act (LCCA) was passed in 1988. This Act required lead contamination investigation and mitigation in all elementary and secondary schools, and all kindergarten and daycare facilities. One section of the Act required that all water coolers be sampled, and required installation of corrections to remove the lead or replacement of specific types of water coolers found to contain either lead liners or copper plumbing soldered with lead. U.S.EPA published and disseminated two documents, called "Lead in Drinking Water in Schools and Non-Residential Buildings", EPA 812-B-94-002 and "Sampling for Lead in Drinking Water in Nursery Schools and Day Care Facilities", EPA 812-B-94-003. These publications were distributed to every school and licensed day care facility by the Department. The Department received a letter from U.S.EPA Region 5 on November 13, 1989, indicating that all requirements of the LCCA had been met, and a commendation for our outreach efforts to educate regional staff, plumbing inspectors, and networking with local health departments.

If you have any questions regarding the information in this response, please contact Eric Portz, Division of Environmental Health at 217-782-5830, or TTY 800-541-0466 (for hearing impaired use only).

Sincerely,

Eric E. Whitaker, MD

Eric E. Whitaker, M.D., M.P.H.
Director

EP:eb

cc: Illinois Environmental Protection Agency

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

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April 30, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles: Ben

Re: State and Local Programs to Control Lead in Drinking Water

Thank you for the letter you sent on March 16, 2004, regarding state and local efforts to protect children from exposure to lead in drinking water at schools and day care facilities.

Currently there are 19 community water systems (CWS) in Indiana that have exceeded the 90th percentile action level of 15 ppb for lead. Of these 19 CWSs, seven are cities and towns, five are mobile home parks, and five are subdivisions, one a federal facility and one a county prison.

There is a likelihood that the seven CWS that are cities and towns are supplying water to schools located within the city limit. We do not have a listing of which schools those are.

There are a total of 263 schools that operate their own system to provide potable water to their customers or students. Of these 263 schools, 16 have exceeded the 90th percentile action level.

IDEM follows federal rules when implementing lead requirements in drinking water. When a public water system exceeds the 90th percentile action level for lead, it is required to sample for water quality parameters and source water sampling. These samplings are done to characterize the quality of the water, both from the source and the tap. The system is required to post a "Public Education" for the duration of the problem, and must submit a "Corrosion Control Treatment Recommendation" for approval as to how the system plans to resolve the lead problem. Since lead is an action level instead of a limit that has impacts on human health, the system has to undergo or trigger sampling and treatment requirements to achieve compliance.

If a system fails to perform necessary follow up activities, it's referred to IDEM's Office of Enforcement for not achieving all of the above-mentioned trigger requirements.

The Office of Water Quality's Drinking Water Branch is making sure that water systems that have exceeded lead action levels are submitting the required information on a timely basis.

Systems without any history of lead issues are still required to monitor at a frequency of no less than once every three years to ensure that they are still meeting the lead and copper action levels.

I have enclosed the lists of Community Water Systems that have exceeded lead action levels and the 16 schools that have exceeded the lead action level.

IDEM's Office of Planning and Assessment and Office of Pollution Prevention and Technical Assistance have also taken steps to protect children from lead in drinking water. In 1998, IDEM, the Indiana State Department of Health (ISDH), and the Marion County Health Department launched the "2000 Lead-Safe Families for 2000 Project," with the goal of reducing lead exposure to children. It was the first innovative project of its kind in the nation, focusing on the primary prevention of lead poisoning.

IDEM, ISDH and the Marion County Health Department teamed up and provided families and child care facilities with free lead risk assessments and educational outreach materials.

Since the launch of the project, IDEM has trained more than 100 lead assessors who have performed over 1,300 lead assessments at homes and child care facilities throughout Indiana that requested to have their water tested for lead. Assessors identified areas where children may be at risk of lead poisoning, promoted awareness of the lead risks and educated families on ways to reduce lead poisoning, such as using cold water for drinking and cooking and to let it run for 30 seconds before using it.

IDEM analyzed the data gathered during the lead assessments and prepared the "2000 Lead-Safe Families for 2000 Project Review." Background information and the Project Review can be found on IDEM's Web site at: http://www.in.gov/idem/envirohealth/lead.html.

If we can help answer any specific questions or concerns, please don't hesitate to contact Mr. Al Lao in our Office of Water Quality at 317-308-3283 or, via e-mail, at alao@dem.state.in.us.

Sincerely,

Lori

Lori Kaplan
Commissioner

Enclosure
cc: Tim Method, IDEM
Pat Carroll, IDEM
Al Lao, IDEM
Jim Mahern, IDEM
Paula Smith, IDEM
Tami Johnson, IDEM

Community_PWS_w_current_lead_ac

PWSID	System Name
5209004	Maple Lane Village Mobile Home Park
5218003	Country Acres Mobile Home Park
5218013	Quiet Acres Mobile Home Park
5218021	Rosewood Manor Residential Center
5229012	Tall Timber Mobile Home Park-East
5232018	Oakhurst Park Mobile Home Commmunity
5241015	Camp Atterbury
5242008	Monroe City Water Utilities
5246008	Duneland Beach Association
5246031	Westville Estates
5246038	Indian Springs Town Homes
5261001	Bloomingdale Water Works
5264045	Northwoods Park Association
5268002	Farmland Municipal Water Works
5275003	North Judson Water Company
5277002	Dugger Utilities
5283005	Dana Water Works
5283010	St. Bernice Water Corp.
5283012	Vermillion County Jail

Schools_w_current_lead_action_l

PWSID	System Name
2050006	Blackford County Schools Central Office
2180851	Cowan High School
2270017	Washington Elementary School
2270019	Liberty School
2290862	Durbin School
2330192	Immanuel Baptist School & Church
2370005	Demotte Elementary School
2370009	Kankakee Valley High School
2440996	Howe Military School/Main Well
2460041	Purdue University North Central
2480016	College Corner Elementary
2520834	Maconaquah Elementary School
2640021	Liberty Middle Schools
2640023	Jackson Elementary School
2900012	Norwell Middle School
2920883	Sonshine Childcare Ministry

Iowa Department of Public Health

Thomas J. Vilsack
Governor

Sally J. Pederson
Lt. Governor

Mary Mincer Hansen, R.N., Ph.D.
Director

April 26, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

We are writing in response to your letter of March 18, 2004, to Dr. Mary Mincer Hansen, Director of the Iowa Department of Public Health, and to Mr. Jeff Vonk, Director of the Iowa Department of Natural Resources (IDNR). The responses of both agencies are contained in this letter, since the Lead Poisoning Prevention Program and the Public Water Supply Supervision Program are both involved with protection of Iowa's citizens from lead hazards.

The IDPH Lead Poisoning Prevention Program

In 1989, Governor Terry Branstad designated the Iowa Department of Public Health (IDPH) as the state agency to implement the Lead in Schools Drinking Water portion of the Lead Contamination Control Act of 1988. While no funds were allocated to implement this program, IDPH worked with the Iowa Department of Education to provide information to schools and with the Iowa Department of Human Services to provide information to preschools and day-care centers. The IDPH program consisted of three major components:

1. Providing guidance information to schools, preschools, and day-care centers.
2. Following up to see how the information was utilized.
3. Offering technical assistance to schools, preschools, and day-care centers that had questions or encountered problems.

Informational Mailings

IDPH sent two informational mailings to all schools, preschools, and day-care centers. The first mailing was sent out in May 1989 and consisted of an explanatory memo, the list of Iowa laboratories certified to test for lead in drinking water, the list of lead-lined and non-lead-free coolers from the U.S. Environmental Protection Agency (EPA), the EPA booklet, *Lead in School's Drinking Water*. A second mailing was sent to schools, preschools, and day-care

centers in April 1990 to provide the updated EPA list of lead-lined and non-lead-free coolers and information to clarify areas of questions and concerns.

Follow-up Program

In October 1989, IDPH sent a follow-up survey to schools, preschools, and day-care centers so that the department could determine whether they were finding any lead-lined or non-lead-free coolers, whether they were testing their water, and whether they were finding elevated levels of lead in their drinking water. They were asked to list model numbers and serial numbers of the water coolers that were found on the EPA list, to indicate if they had completed water sampling and inspected their plumbing as recommended in the EPA *Lead in Schools Drinking Water* manual, and to indicate whether elevated levels of lead were found in their drinking water.

In April 1990, a second survey was sent to schools, preschools, and day-centers along with EPA's updated list of coolers and other information asking schools, preschools, and day-care centers that had not previously filled out and returned a survey to do so.

Iowa's Lead in Schools Sampling Results

Number of Institutions Receiving Surveys

Preschools/Day-care Centers	1300
School	800

Number of Follow-up Surveys Returned

Preschools/Day-care Centers	578 (44%)
School	380 (48%)

Number Sampling Water

Preschools/Day-care Centers	324 (25% of total; 56% of those responding to survey)
School	273 (34% of total; 72% of those responding to survey)

Number Reporting Sample Results to IDPH

Preschools/Day-care Centers	291 (90% of those sampling water)
School	256 (94% of those sampling water)

Number with Lead Levels >20 ppb

Preschools/Day-care Centers	22 (8% of those reporting results)
School	68 (27% of those reporting results)

Number with Lead Levels ≥10 ppb and ≤20 ppb

Preschools/Day-care Centers	13 (13% of those reporting results)
School	104 (41% of those reporting results)

Site of Samples >20 ppb	**Number of Facilities Reporting**
Cooler	45
Non-cooled bubbler	28
Faucet	44
Steam kettle	4

Two of the coolers that were found to have lead-lined tanks were not on the EPA list of coolers with lead-lined tanks. These coolers were sent to Mr. Thomas Sorg of EPA in Cincinnati for further testing.

Technical Assistance Program

The IDPH technical assistance program consisted of:

1. Answering questions over the telephone, phoning or writing to advise schools that needed to take corrective action to lower levels of lead in water to less than 20 ppb and that they should test coolers on the EPA lists for lead in water.
2. Investigating instances of coolers with possible lead-lined tanks that were not on the EPA list.
3. Conducting on-site investigations with widespread contamination of problems to find the source(s) of the problems and solutions.

The University Hygienic Laboratory analyzed water samples that IDPH collected during on-site investigations. The Iowa Department of Natural Resources assisted IDPH by providing interpretive guidance regarding measurements of water corrosivity and information about public water supplies that served schools, preschools, and day-care centers where elevated levels of lead in water were found.

In the fall of 1991, the Centers for Disease Control and Prevention (CDC) released a new statement, *Preventing Lead Poisoning in Young Children*. In this statement, CDC reduced the blood lead level of concern in children from 25 micrograms per deciliter (μg/dL) to 10 μg/dL and suggested that lead-based paint was the primary source of lead exposure for most children. IDPH examined Iowa's housing and socioeconomic data, which revealed that Iowa has some of the oldest housing in the United States and would be expected to have a large number of lead-poisoned children. This was confirmed in the spring of 1992 when physicians started to implement CDC's recommendation that all children be tested for lead poisoning. State law requires the results of all blood lead testing to be reported to IDPH, so IDPH was aware of the many cases of lead poisoning that were being identified around the state. IDPH investigated these cases of lead poisoning and determined that they were being caused by lead-based paint hazards. By contrast, although IDPH found very high levels of lead in water in some schools, preschools, and day-care centers, the lead in water did not appear to be contributing to any cases of childhood lead poisoning. In July 1992, IDPH received a childhood lead poisoning prevention grant from CDC. Since no funds had ever been available to implement the Lead in Schools Drinking Water portion of the Lead Contamination Control Act of 1988 and since lead in water did not appear to be contributing to the high rate of childhood lead poisoning in Iowa, IDPH redirected its efforts from identifying high levels of lead in water to identifying lead-based paint hazards. In 2004, lead-based paint hazards in housing continue to be the primary cause of lead poisoning in Iowa's children.

The IDNR Public Water Supply Supervision Program

Background

The Iowa Department of Natural Resources has the responsibility to implement the Safe Drinking Water Act in Iowa. Lead has been monitored in Iowa's public water systems since the 1980's. It was first regulated by a treated water maximum contaminant level of 0.05 mg/L, which was replaced in 1991 by an "at the tap" action level of less than 0.015 mg/L in 90% of the targeted residences. If that action level is exceeded, it triggers the system into further activities, which include mandatory public education and water quality monitoring, and which may include corrosion control treatment, source water monitoring/treatment, and lead service line replacement. All community (CWS) and non-transient non-community (NTNC) systems are required to comply with the lead rule.

Sampling sites are selected based upon when the homes were constructed and what materials were used in the plumbing (lead or copper piping, lead solder, etc.). Those same sites are used throughout the years, unless there is a documented reason for changing the site to an alternate location (family installs a water softener, refuses to collect the sample, house is vacant, etc.). Samples are collected after the water has resided in the pipes for a minimum of 6 hours. The first draw is collected, which represents the water residing in the home's immediate plumbing. All systems must collect at least five samples each sampling round from different residences. The larger the system, the more samples are required, up to 120 samples per round for Des Moines.

If the system is a non-transient non-community system, such as a factory, school, or daycare, then it will designate taps at its facility for sampling.

All NTNC and CWS public water systems are required to conduct two rounds of sampling at the targeted residences in the first year of the program. After that, the longest time period that can elapse between sampling rounds is three years. Since this program has been operational since 1992 for existing systems, all of those systems have had at least 5 rounds of sampling (two 6-month initial rounds plus 3 triennial rounds).

Lead in Iowa's Source Water

Unlike some parts of the nation, there have not been any significant levels of lead found in Iowa's source waters. The source of lead in Iowa's public drinking water is plumbing material: lead service lines, lead piping, lead solder, brass fittings, and brass fixtures.

Lead Action Level Exceedances in Iowa

1992-2003

In the first 11 years of this program (1992 through 2003), 191 active systems had at least one lead action level exceedance, which is 15% of the 1,291 active systems currently required to comply with the lead rule. (Please note that there are other systems that had lead exceedances but have since connected to another water system and thus are no longer active public water systems. Such systems have not been included in any of the statistics listed in this report.)

- 35 NTNC systems exceeded the action level, of which 12 are schools or child care centers. Of those 12 systems, only 2 schools were still out of compliance with the lead action level in 2000, and both have since come into compliance.

- 156 community water systems (municipalities, subdivisions, mobile home parks) exceeded the action level.

2000 - 2003

In the past 3 years, 33 active systems have had at least one lead action level exceedance, which is 2.6% of the 1,291 active systems currently required to comply with the lead rule. Of those 33 systems,

- 12 are now in compliance with the lead rule, and,
- 21 remain out of compliance with the lead action level (1.6% of the 1,291 active systems currently required to comply with the lead rule). Of those 21 systems, 2 are industries, and 19 are community systems.

Currently, 98.4% of Iowa's CWS and NTNC systems are in compliance with the lead action level.

Future Plans at IDPH and IDNR

Because lead-based paint hazards in housing continue to be the primary cause of lead poisoning in Iowa's children, IDPH plans to continue to focus its efforts on reducing lead-based paint hazards in Iowa's housing. Unless EPA can provide funding to IDPH so that it can dedicate staff time to the Lead in Schools Drinking Water portion of the Lead Contamination Control Act of 1988, IDPH does not intend to initiate any additional efforts for this program. IDNR will continue to implement and enforce the federal lead and copper rule requirements in Iowa's public water supply systems.

If you have any questions regarding Iowa's efforts, please contact Rita Gergely of the Iowa Department of Public Health or Dennis Alt of the Iowa Department of Natural Resources.

Sincerely,

Rita M. Gergely, Chief
Bureau of Lead Poisoning Prevention
Division of Health Protection and
Environmental Health
Iowa Department of Public Health
321 East 12th Street
Des Moines, IA 50319-0075
Phone: 515/242-6340
Fax: 515/281-4529
E-mail: rgergely@idph.state.ia.us

Dennis Alt, Supervisor
Water Supply Section
Water Quality Bureau
Iowa Department of Natural Resources
401 SW 7th Street, Suite M
Des Moines, IA 50309-4611
Phone: 515/725-0275
Fax: 515/725-0348
E-mail: dennis.alt@dnr.state.ia.us

K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

April 29, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator for Water
EPA East, Mail Code 4101M
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Dear Mr. Grumbles:

In response to your March request for information on Kansas school/day care lead programs, the following comments are provided:

The Bureau of Water, within the Division of Environment, does not have a program that specifically targets lead in drinking water at schools and day care facilities. If a school or day care facility is regulated as a public water system, the facility would fall under the lead and copper rule. Most schools and day care facilities are on municipal public water supplies.

The primary function of the Bureau of Consumer Health, Childhood Lead Poisoning Prevention Section, within the Division of Health, is educational. The majority of their work in childhood lead poisoning prevention is focused on lead based paint hazards, primarily because these hazards are the leading contributor to childhood lead poisoning. With that said, there have been occasions when Division of Health has provided information regarding lead poisoning prevention in these settings and information on ways to reduce possible exposure to lead in water -- again, educational.

At this point, we can not identify a single case in Kansas that was directly attributed to lead in drinking water, or more specifically lead in drinking water in schools or day care centers.

Sincerely,

Ronald F. Hammerschmidt, Ph.D.
Director, Division of Environment

RFH:cah
C - Richard Morrissey, Division of Health
Lesa Roberts, Bureau of Consumer Health
Tom Morey, Bureau of Consumer Health
David Waldo, Bureau of Water
Karl Mueldener, Bureau of Water

DIVISION OF ENVIRONMENT
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 400, TOPEKA, KS 66612-1367
Voice 785-296-1535 Fax 785-296-8464 http://www.kdhe.state.ks.us

ERNIE FLETCHER
GOVERNOR

CABINET FOR HEALTH AND FAMILY SERVICES
DEPARTMENT FOR PUBLIC HEALTH
275 EAST MAIN STREET, HS1GWA
FRANKFORT, KENTUCKY 40621-0001
(502) 564-3970 (502) 564-9377 FAX

JAMES W. HOLSINGER, JR., M.D.
SECRETARY

April 6, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water, 4601M
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your recent inquiry regarding actions Kentucky is taking to ensure that children are not exposed to lead from drinking water in schools.

In response to a copy of your letter, Julie Roney of the Natural Resources and Environmental Protection Cabinet, Division of Water, plans to correspond with you regarding Kentucky's actions for lead testing of water in public schools as related to the Lead Contamination Control Act of 1988.

The role of the Department for Public Health in lead poisoning prevention is to direct a screening program for children 6 months to 6 years of age. Water tests for lead are conducted as indicated in private residences, as well as other sites where children with lead poisoning reside or spend considerable time. These sites may, at times, include schools and day care centers. The department also occasionally collects water samples as requested by local water districts. These tests are random and may or may not include schools. The Department for Public Health does not provide proactive testing of water in schools.

Please contact us if we can be of further assistance. I hope this information is helpful to you.

Sincerely,

Rice C. Leach, M.D.
Commissioner

cc: Julie Roney

State of Louisiana

Department of Environmental Quality

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

APR - 8 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: State Programs to Control Lead in School Drinking Water

Dear Mr. Grumbles:

The Department of Environmental Quality's (DEQ) role in controlling lead in drinking water for schools and day care facilities falls under the state's Drinking Water Protection Program. DEQ's Drinking Water Protection Program concentrates on protecting drinking water sources consisting of aquifers and surface water bodies. The program involves intensive public education and outreach. Local communities are educated about practices that will protect drinking water by preventing contamination of the actual source water. School presentations are a significant component of the program. To date, DEQ has made presentations on source water protection to approximately 5,000 students and their teachers over the past year.

The Department of Health and Hospitals (DHH), Office of Public Health (OPH), has primacy for protection of drinking water in the state and oversees compliance of the Lead and Copper rule. DHH is also implementing the Childhood Lead Poisoning Prevention Program (LACLPPP) across the state. This program identifies high-risk areas and targets efforts and resources to reduce the number of children with elevated lead blood levels in Louisiana.

For additional information about DEQ's Drinking Water Protection Program, please contact Howard Fielding at (225) 219-3505 or by email at howard.fielding@la.gov. Additional information about the DHH efforts to control lead should be directed to the Safe Drinking Water Administrator of DHH/OPH, Karen Irion, at (225) 765-5046 or by e-mail at kirion@dhh.la.gov.

DEQ will work with DHH to incorporate educational materials regarding the control of lead in schools into DEQ's Drinking Water Protection Program efforts. We would be pleased to receive any comments or suggestions you may have regarding DEQ's efforts.

Sincerely,

Mike D. McDaniel

Mike D. McDaniel, Ph.D.
Secretary

hkf

c: Drinking Water Protection Program File
Karen Irion, DHH
MDM-04-022

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS

LOUISIANA
Department of HEALTH and HOSPITALS

Jabineaux Blanco
GOVERNOR

Frederick P. Cerise, M.D., M.P. H.
SECRETARY

April 7, 2003

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
US Environmental Protection Agency
Office of Water
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Mr. Grumbles:

We are in receipt of your letter of March 18, 2004 requesting a summary of state programs to control lead in school drinking water. In Louisiana, the Safe Drinking Water Program is administered by the Department of Health and Hospitals (DHH), Office of Public Health (OPH), under the direction of DHH Secretary, Dr. Frederick Cerise. The Department used to have an active program, but subsequent to a lawsuit, the staff and resources were permanently shifted to the Lead and Copper Program in 1996. The details of this event are as follows:

On October 31, 1988 Congress passed an amendment to the SDWA, entitled "The Lead Contamination Control Act of 1988". On June 1, 1989 Louisiana initiated a program in response to the statute. Bottles with questionnaires were sent out to all schools. Analysis was performed by the State at no cost to the schools. By 1994, 50% of Louisiana schools had been tested. The analysis of the samples indicated that 517 schools of a total of 3,612 had positive lead samples, most at the faucet, not the water cooler. The average concentration for positive samples was 11 parts per billion (ppb). Only about 5% of the samples exceeded 20 ppb lead. A total of 24,271 samples were analyzed. An inspection and technical assistance program was implemented and the EPA fact sheet on lead in water coolers was sent out to the schools. In 1994 the Lead and Copper Rule was implemented by the Louisiana Safe Drinking Water Program. On May 7, 1993, a group of citizens associated with the Sierra Club sued the State on the grounds that not enough had been done by the state to meet the Lead Contamination Control Act of 1988. On April 22, 1996, the case was dismissed by the U.S. Fifth Circuit Court of Appeals, who found that the provisions of the Lead Contamination Control Act of 1988 that required states to establish remedial action programs to remove lead from schools and day care drinking water fountains was unconstitutional (ACORN v. Edwards, C.A.5 (La) 1996, which cited a violation of Tenth Amendment). This lawsuit had the unintended effect of ending the lead program in schools for the state of Louisiana.

Since 1996, the Safe Drinking Water Program continued implementing the Lead and Copper Rule at all Public Water Systems, including schools and day care centers that are non-community public water systems. Although our *Water Supplies* regulations in the Louisiana Administrative Code, Title 51, Part XII, Section 335 (LAC 51:XII.335) require that all installations or repairs to water systems and plumbing be constructed of lead-free materials, as well as all public drinking fountains and water coolers (LAC 51:XII.371), there are no longer any special drinking water standards or programs for schools. There is still an active lead poisoning

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6867 BLUEBONNET BLVD. • BATON ROUGE, LOUISIANA 70810
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Jabineaux Blanco
GOVERNOR

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS

LOUISIANA
Department of HEALTH and HOSPITALS

Frederick P. Cerise, M.D., M.P. H.
SECRETARY

control program (paint and associated materials) at the Department of Health and Hospitals, Office of Public Health as set out in the Sanitary Code, LAC 51:Part IV.

I hope that this information is helpful to you, and you should feel free to contact me at (225) 765-5046 or at kirion@dhh.la.gov if you have further questions or comments about our efforts.

Sincerely,

Karen S. Irion, P.E.
Safe Drinking Water Program Administrator

cc: Frederick P. Cerise, Secretary, DHH
Sharon Howard, Assistant Secretary, DHH-OPH
Larry Wright, US EPA Region 6
Bobby Savoie, Director, CEHS, DHH-OPH
Douglas Vincent, P.E., DHH-OPH Chief Engineer

State of Maine
Department of Human Services
11 State House Station
Augusta, Maine
04333-0011

John Elias Baldacci
Governor

John R. Nicholas
Acting Commissioner

April 29, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: State Programs to Control Lead in School Drinking Water

Dear Mr. Grumbles:

Thank you for sending your March 18, 2004 letter to Dr. Dora Mills, Maine's Bureau of Health Director, regarding Maine's efforts to monitor lead in drinking water at Maine schools and day care facilities.

Beyond what is required under the federal Safe Drinking Water Act Maine is currently not implementing a program to control lead in drinking water for schools and day care facilities. Schools that are public water supplies must meet the requirements of the Safe Drinking Water Act including those required by the Lead and Copper Rule.

The Drinking Water Program routinely recommends to Community water systems that exceed the Action Limit for lead to take a proactive approach and collect lead samples from all of the schools served by the systems. We also provide copies of the USEPA manual "Lead in Drinking Water in Schools and Non-Residential Buildings" to any public water system that requests additional lead education material.

On April 12, 2004, the Maine Drinking Water Program sent all 90th percentile Lead and Copper data for Community and Non Transient Non Community systems from 1992 forward to EPA. Current data including samples collected since 2000 show that only 3% of Maine's Community and Non Transient Non Community systems exceed the Action Level for Lead. All of these systems are actively involved in remediating the situation.

Please call me at 207-287-5674 if you have further questions.

Sincerely,

Nancy Beardsley, Director
Maine Drinking Water Program
Bureau of Health, Department of Human Services

cc: Dr. Dora Mills, Director, Maine Bureau of Health

STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201
Robert L. Ehrlich, Jr., Governor – Michael S. Steele, Lt. Governor – Nelson J. Sabatini, Secretary

April 16, 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
U.S. Environmental Protection Agency
Office of Water
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your correspondence regarding State and local efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities.

The Department of Health and Mental Hygiene (DHMH) does not conduct monitoring and testing of lead in drinking water at schools and day care facilities. Testing of drinking water is under the purview of the Maryland Department of the Environment (MDE). Hence, I am forwarding a copy of your letter to Kendl P. Philbrick, Secretary, MDE for his review and action.

The DHMH is actively involved in the Maryland Lead Poisoning Prevention Commission that is appointed by Governor, Robert L. Ehrlich, Jr. Recently, the Maryland State Department of Education mailed surveys to school superintendents in all of Maryland's Counties and Baltimore City. The survey asks questions regarding testing for lead in school drinking water. I have attached a copy of that survey for your information. The DHMH is also involved in the Maryland Childhood Lead Screening Program. The mission of this Program is to reduce lead exposure in children under the age of six by promoting blood lead testing and raising lead awareness in communities. The Program is administered by the Department's Center for Maternal and Child Health and works in collaboration with the Maryland Department of the Environment, the Coalition to End Childhood Lead Poisoning, and the Maryland Department of Housing and Community Development. The Childhood Lead Screening Program serves as a resource for families, childcare providers, and health care providers throughout Maryland. The Program provides general information about lead poisoning, a risk assessment checklist, nutritional, and other information to help reduce the effects of lead poisoning, and referrals to obtain appropriate care for a lead poisoned child.

Thank you again for your correspondence. If you have any questions, please contact Diane L. Matuszak, M.D., MPH, Director, Community Health Administration, at 410-767-6742.

Sincerely,

Nelson J. Sabatini
Secretary

Enclosure

cc: The Honorable Kendl P. Philbrick
Ms. Arlene H. Stephenson
Diane L. Matuszak, M.D., M.P.H.
Dr. Russell Moy
Bonnie Stanley Birkel, M.P.H., CRNP
Dr. Maureen C. Edwards

Survey of Lead Testing in Maryland's Public Schools

Local School System (LSS): _____

LSS Point of Contact: _____

Phone: _____ **FAX:** _____

Email: _____ **Date:** _____

1. **Did your local school system sample water for lead levels under the 1988 Lead Contamination Control Act?**
   - If yes, when was it completed?
   - Were elevated lead levels found in any drinking water sites (faucets/fountains) at that time?
   - What solutions were implemented?
   - Was follow-up testing performed of faucets and water fountains in your schools?
2. **What is your policy and procedure for lead testing of water in your schools? (Please attach a copy if available).**
   - What agency is responsible for lead in water testing?
   - What is your interaction with your local Health Department and the Maryland Department of the Environment regarding lead issues in your schools?
   - When was the last time that your schools were tested for lead in water?
   - What is your procedure for remediation should you discover a lead in water problem?
   - Do you have policies for renovation and new school construction regarding lead in plumbing including water fountains/coolers?
   - Are records maintained of all inventories/testing in schools for lead in water? By whom?
3. **Additional comments regarding lead in water policy or procedure.**

Survey of Lead Testing in Maryland's Public Schools

Local School System (LSS): _____

4. **What is your policy and procedure for lead testing related to lead paint in your schools? (Please attach a copy if available).**

5. **What is your policy and procedure for lead testing of lead contaminated soil on school property? (Please attach a copy if available).**

Please send completed report by April 9, 2004 to: Ms. Vicki Taliaferro, Specialist, School Health Services, Maryland State Department of Education, 200 West Baltimore Street, 4th Floor, Baltimore, Maryland 21201

Phone: (410) 767-0305 **FAX: (410) 333-8148**

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

APR 3 0 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your letter of regarding the protection of children from exposure to lead in drinking water at schools and day care facilities. We appreciate the opportunity to describe major activities that our state has undertaken to minimize childhood lead exposure from drinking water in schools and daycare facilities. It is important however to expand the focus beyond water media and consider the State's overall efforts toward reducing lead exposure for children.

Maryland has made considerable progress over the past decade in reducing childhood lead exposure as a result of the cooperative efforts of State, local, federal agencies; as well as advocacy groups and property owners. Details of this progress can be seen at: www.mde.state.md.us/Programs/LandPrograms/LeadCoordination/index.asp

Five groups in Maryland that play important roles in the prevention of childhood lead poisoning are described in Enclosure 1. In Maryland's experience, we have seen many children significantly impacted by lead exposure from paint dust and paint chips, yet have only one documented case of lead poisoning from drinking water in recent years. The affected infant received water from a refrigerated tap supplied by a private well. During the past year, blood lead levels were tested in over 1,300 students from 15 Baltimore City elementary schools. The schools all had fountains with elevated lead levels. None of these students had elevated blood lead levels.

Nonetheless, as described in Enclosure 2, we are actively involved in assisting schools to reinitiate programs for lead testing in their drinking water. We welcome any assistance that the Environmental Protection Agency (EPA) can provide, and appreciate the effort of Region III staff who worked with the City of Baltimore during the retesting and rediscovery of elevated lead in fountains in 2003.

It would be helpful for the EPA to assist states with funding to compile and analyze data, and provide technical assistance to schools and day care facilities.

If you would like to further discuss our efforts in Maryland or have any questions regarding the enclosed information, please do not hesitate to contact me at 410-537-3893 or have a member of your staff contact Dr. Robert Summers, Director of Water Management at 410-537-3567.

Very truly yours,

Steve Pattison for

Kendl P. Philbrick
Secretary

Enclosures

1) Maryland Lead-Related Programs
2) Maryland Activities to Address Lead in Drinking Water
3) Department of Education School Survey
4) LCCA Sample Collection Form

cc: Dr. Robert Summers, MDE
Secretary Nelson Sabatini, DHMH
Donald Welsh, EPA-Region III Administrator

Enclosure 1

Maryland Lead-Related Programs

Maryland Department of Environment-Water Supply Program implements the Safe Drinking Water Act for Maryland. The program oversees the Lead and Copper Rule activities, provides technical assistance to water systems, and provides guidance to the laboratories. The Maryland Department of the Environment (MDE) is charged with ensuring that all Marylanders have a safe and adequate supply of drinking water. Maryland's public water supplies serve approximately 84% of the State's residential needs.

Maryland Department of the Environment-Lead Poisoning Prevention Program serves as the coordinating agency of statewide efforts to eliminate childhood lead poisoning. Under the 1994 "Reduction of Lead Risk in Housing" law, MDE assures compliance with mandatory requirements for lead risk reduction in rental units built before 1950; maintains a statewide listing of registered and inspected units; and, provides blood lead surveillance through a registry of test results of all children tested in Maryland. The Lead Program also oversees case management follow-up by local health departments for children with elevated blood lead levels; certifies and enforces performance standards for inspectors and contractors working in lead hazard reduction; and performs environmental investigations for lead poisoned children. The Lead Program provides oversight for community education to parents, tenants, rental property owners, homeowners, and health care providers to enhance their role in lead poisoning prevention. The Lead Program has provided public education material at MDE's website at www.mde.state.md.us/lead.

Department of Health and Mental Hygiene-Laboratory Administration: Maryland's Lead Laboratory, located at the Department of Health and Mental Hygiene (DHMH), began offering blood level lead testing in 1935. It was the first laboratory in the United States to provide such a service, and it alerted the nation that lead poisoning was a major childhood health problem. Maryland's Lead Laboratory provides blood lead screening of children as well as environmental sample analysis (e.g. paint chips, dust wipes, soil, etc.) to identify sources of lead exposure for the children with elevated blood levels. DHMH also provides analysis of lead in drinking water through its Multi-Element Section of the Laboratories Administration. The elevated blood lead results are reported to the central registry at the Maryland Department of the Environment (MDE), and also reported to the DHMH coordinator of childhood lead screening.

Maryland's Lead Poisoning Prevention Commission, was established in 1984 as the Lead Council to advise the MDE, the Legislature, and the Governor regarding lead poisoning prevention in Maryland. The Commission provides oversight of lead poisoning prevention in Maryland and monitors and evaluates the effectiveness of the 1994 "Reduction of Lead Risk in Housing" statute (Environment Article 6-8).

The Coalition to End Childhood Lead Poisoning based in Baltimore was established in the early 1990's and is a very active advocacy group that is a regular participant in the Lead Poisoning Prevention Commission meetings and provides grants for projects and contracts. For more information about this organization, go to: http://www.leadsafe.org/

Maryland Department of Labor, Licensing, and Regulation-State Board of Plumbing licenses and regulates individuals who provide or assist in providing plumbing and gas services in Maryland. The State Plumbing Code is adopted by each County and enforced by local plumbing inspectors. The Code of Maryland Regulations 09.20.05.02D prohibits the use on joints and connections of lead solders and fluxes having a lead content greater than 0.2 percent; and 09.20.11.10E prohibits lead content in excess of 8.0 percent in pipe and pipe fittings.

Enclosure 2

Maryland Activities to Address Lead in Drinking Water

Maryland has been in the forefront of the national efforts to prevent childhood lead poisoning. As early as 1935, Maryland's Lead Laboratory, located at the Department of Health and Mental Hygiene (DHMH), began offering blood level lead testing

The most effective prevention of childhood lead poisoning is to reduce or eliminate exposure to lead from all sources. In Maryland's experience, lead in drinking water has not been a significant source of lead poisoning. In fact, there has only been one documented case in Maryland in which the major source of lead exposure was from the drinking water. In that case, water from a private well was provided to an infant through a contaminated refrigerator tap. The major source of exposure for children is lead paint dust from deteriorated lead paint or from home renovation. The three groups in Maryland that play a crucial role in the prevention of childhood lead poisoning include the Lead Poisoning Prevention Commission, the Maryland Department of the Environment (MDE), and the Coalition to End Childhood Lead Poisoning (see Enclosure 1).

In 1986, prior to EPA's Lead Contamination Control Act of 1988 (LCCA), Maryland took a proactive approach and conducted a survey of 82 elementary and secondary schools across the state to check for excessive lead levels in drinking water. The targeted schools were newly built and less than four years old, or had new plumbing installed within the past four years. The purpose of this study was to assess the impact of lead from solder in schools with new plumbing systems since 50 percent lead solder was used until the lead ban was passed in Maryland in June 1986. Recognizing the relationship between the length of time water remains stagnant in plumbing and the corresponding increase in lead levels, Maryland ordered first-draw samples for the study. The same protocol for lead sampling (first-draw samples) was later used by the EPA when the LCCA was passed. Maryland's study began in February 1986, and schools that had elevated lead levels in the drinking water provided bottled water for the children and staff to drink. In conjunction with the study, Maryland's Office of Environmental Programs at DHMH published an informational brochure titled "Preventing Lead Poisoning: What Every Parent Should Know."

Under the LCCA, the Maryland Department of the Environment and the Maryland Department of Education notified schools and daycare centers of the EPA's recommendations to test drinking water for lead, and provided a list of recalled water fountains. Lead testing was conducted by most public and private schools in Maryland under the LCCA; however, federal enforcement authority was not a component of the program.

In the late 1980s, under the Safe Drinking Water Act, water suppliers were required to provide notice to their customers regarding the health effects of lead. The State also enacted a lead ban for solder and required "lead free" solder and fixtures. Beginning in 1992, the Lead and Copper Rule (LCR) activities were jointly implemented with EPA- Region III. The LCR and LCR Minor Revisions were adopted by Maryland in 1995 and 2002, respectively. Initially over 33 percent of Maryland's water systems exceeded either the lead or copper action levels.

Currently all of Maryland's 62 medium and large water systems (serving 4.3 million people in Maryland) are meeting the EPA's lead action level (15 ppb) and are on a reduced monitoring schedule. Fewer than ten percent of Maryland's public water systems continue to exceed the lead action level. Technical assistance and enforcement activities have been effective in reducing the lead and copper levels in Maryland drinking water systems; these activities are ongoing. In addition, the MDE Water Supply Program has reported all lead 90th percentile data to EPA's SDWIS database.

Most recently, Maryland's efforts to address lead in drinking water at schools included a survey sent out by the State Department of Education on March 16, 2004 to all Superintendents of Schools at each of Maryland's 23 counties and Baltimore City. The survey (see Enclosure 4) was a joint effort among several state agencies (the Department of Education, the Department of Human Resources Child Care Administration, the DHMH, and the MDE) and Friends of the Family, Inc., which have representatives in Maryland's Lead Poisoning Prevention Commission. The survey was conducted in order to evaluate the current status of lead testing efforts within Maryland's public schools and was prompted by the 2003 lead testing within Baltimore City Public Schools that revealed elevated levels of lead in the drinking water.

After learning about the problems within the Baltimore City schools, the Lead Commission asked the MDE to provide information on the status of lead testing in Maryland's water supplies. The Commission recognized a serious discrepancy between the current EPA regulation that dealt with lead in drinking water in public water supplies under the LCR, and the voluntary, non-enforceable LCCA. The Commission charged the Health Committee with the task of developing a survey to address this situation.

Efforts to reduce exposure to lead in the drinking water at the Baltimore City schools continue. Bottled water was provided at all public schools in Baltimore that showed elevated levels of lead in water coolers. A newspaper article in the Baltimore Sun dated August 22, 2003 reported that testing of more than 1,300 pupils in 15 Baltimore City elementary schools by the Baltimore Health Department revealed that none of the children had elevated levels of lead in their blood, despite the elevated lead levels found in the drinking water at these schools.

In response to the March survey, many of Maryland's local Boards of Education have begun contacting MDE for guidance on testing for lead in the drinking water at the schools that are supplied by municipal water, since only the schools with their own water supplies are required to test under the LCR. On April 6, 2004, MDE notified 20 State-certified laboratories that routinely test for lead in drinking water in Maryland to use the LCCA protocol when collecting samples from schools and daycare centers that are supplied drinking water from public water systems. In addition, MDE included a LCCA sample collection form (see Enclosure 3) that was initially developed to assist Baltimore City schools in 2003. To date, one-third of Maryland's counties have confirmed with MDE that their schools are now being tested for lead in the drinking water or will be tested for lead in the near future.

Unfortunately, lead testing in drinking water is somewhat confusing for many of Maryland's counties since the schools that are being supplied by individual well water are testing according to LCR protocol and the schools that are connected to municipal water are testing according to LCCA protocol. The two protocols are very different, and even have different lead

"action" levels (20 ppb under LCCA and 15 ppb under LCR). The different protocols are expected to cause some confusion when parents are notified of test results and they ask why children in one school are subject to a different standard than children in another school.

In March 2004, the Washington Suburban Sanitary Commission (WSSC), Maryland's second largest water supplier, initiated a program to address lead in drinking water at approximately 400 schools in response to the widespread news about the elevated lead levels in Washington DC's drinking water. The WSSC is currently working with the Boards of Education in Montgomery and Prince George's Counties in Maryland and is providing free lead testing to all public schools in these two counties as well as testing for lead at a reduced cost to private schools. Schools have been prioritized according to the at-risk populations, such as elementary schools or schools with women of childbearing age. The WSSC is following the EPA recommended LCCA sampling protocol. The current status of each school can be obtained through WSSC's website http://www.wsscwater.com/info/leadinformation/leadinformation.html. At this time, all 388 schools are on a flushing program in which designated drinking water taps are flushed a minimum of 15 minutes every 4 hours.

Enclosure 3

MARYLAND STATE DEPARTMENT OF EDUCATION
Achievement in Maryland

Nancy S. Grasmick
State Superintendent of Schools

200 West Baltimore Street • Baltimore, MD 21201 • 410-767-0100 • 410-333-6442 TTY/TDD

March 16, 2004

To Local Superintendents of Schools:

The Governor appointed Maryland Lead Poisoning Prevention Commission has requested information from each jurisdiction regarding the testing for lead in water in our public schools. As you may already know, unhealthy levels of lead in water have been discovered in Baltimore City Public Schools and most recently in Washington, D.C. and Arlington, Virginia. In order to be proactive regarding this issue, we ask that you complete and return the attached survey by **April 9, 2004** to: Ms. Vicki Taliaferro, Specialist, School Health Services, Maryland State Department of Education, 200 West Baltimore Street, Baltimore, Maryland 21201. Your responses will be summarized and shared with you and the Commission.

Thank you for your assistance in providing the requested information. If you have any questions or need additional information, please contact Ms. Barbara Bice, School Facilities, at (410) 767-0097, or email bbice@msde.state.md.us.

Sincerely,

Nancy S. Grasmick
State Superintendent of Schools

NSG:VT:mw
Attachment

c: Ron Peiffer
Maureen Edwards
Vicki Taliaferro
Barbara Bice
Mary Vogel
Environmental Safety Coordinators

Survey of Lead Testing in Maryland's Public Schools

Local School System (LSS): _____

LSS Point of Contact: _____

Phone: _____ **FAX:** _____

Email: _____ **Date:** _____

1. **Did your local school system sample water for lead levels under the 1988 Lead Contamination Control Act?**

   - If yes, when was it completed?
   - Were elevated lead levels found in any drinking water sites (faucets/fountains) at that time?
   - What solutions were implemented?
   - Was follow-up testing performed of faucets and water fountains in your schools?

2. **What is your policy and procedure for lead testing of water in your schools? (Please attach a copy if available).**

   - What agency is responsible for lead in water testing?
   - What is your interaction with your local Health Department and the Maryland Department of the Environment regarding lead issues in your schools?
   - When was the last time that your schools were tested for lead in water?
   - What is your procedure for remediation should you discover a lead in water problem?
   - Do you have policies for renovation and new school construction regarding lead in plumbing including water fountains/coolers?
   - Are records maintained of all inventories/testing in schools for lead in water? By whom?

3. **Additional comments regarding lead in water policy or procedure.**

LEAD IN DRINKING WATER IN SCHOOLS AND NON-RESIDENTIAL BUILDINGS

Enclosure 4

SAMPLE COLLECTION FORM

BACKGROUND

A sample is to be collected after an extended period (8 hours) of stagnant water conditions in the building's plumbing. This means the water in the building cannot be used for any reason, including toilet flushing, showers, etc. Due to this requirement, early morning is the best time to collect samples.

REQUIREMENTS

- The targeted sample tap location must be an outlet which is regularly used by students and/or staff/workers for drinking, cooking, or even making coffee (e.g. kitchen sink, water fountain/cooler, teacher's lounge sink, etc.).
- The sample bottles (2 per sample tap) must be 250 milliliters in volume.
- The water must stand in the plumbing for a minimum of 8 hours (and a maximum of 18 hours). This is referred to as a "First Draw" sample.
- The sample must be collected from a COLD water tap.

DIRECTIONS

1. After the water has been dormant in the plumbing for a minimum of 8 hours, place the 250 milliliter bottle under the cold water tap.

2. Gently open the cold water tap directly into the bottle and fill the bottle to the neck (or line marked "250-mL").
   - Do not allow the tap to flow prior to collection.
   - Do not rinse bottle prior to collection.
   - Do not overfill.

3. Tightly cap the sample bottle.

4. Let the water run for approximately 30 seconds, and fill the second bottle to the neck (or line marked "250-mL"). This is referred to as a "Flushed" sample.

5. Tightly cap the sample bottle.

6. Review each sample bottle label to ensure that all of the information contained on the label is correct.

7. Fill out the bottom portion of this sheet and return with the sample bottles.

1st Draw Sample ID#: _____ (should correspond with sample bottle label #) Flushed Sample ID#: _____ (should correspond with sample bottle label #)

TO BE COMPLETED BY THE PERSON COLLECTING THE SAMPLE:

Collector Name: _____ Telephone #: _____

Sample tap location (kitchen sink, water fountain, etc.): _____

Water fountain/cooler/bubbler manufacturing company and model number: _____

Building Address: _____

Water last used: Time:_____ Date:_____

1st Draw Sample was collected: Time:_____ Date:_____

Length of time water remained in pipes before 1st draw sample was collected:_____hours

CERTIFICATION:

I have read the above directions and have collected this sample in accordance with these directions

_____

SIGNATURE DATE

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner

May 3, 2004

Ms. Cynthia Dougherty
Director Office of Ground Water and Drinking Water
U.S. Environmental for Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Re: Lead in School Drinking Water

Dear Ms. Dougherty,

In response to the USEPA request of March 18, 2004, for information on State drinking water programs activities to address lead in school drinking water, the Department of Environmental Protection (DEP), Drinking Water Program (DWP) has the following information to offer: The DEP coordinates initiatives with several partners to provide a lead in school drinking water abatement program that responds to the needs of schools in Massachusetts.
DEP has worked to fulfill the requirements of the Lead Contamination Control Act of 1988 (LCCA), and to mitigate lead levels in Massachusetts. In addition to its responsibilities under the Lead and Copper Rule, the DEP has worked aggressively to reduce children's exposure to unacceptable levels of lead. Below are some of the actions that are being taken by the Department.

- ✓ DEP has an agreement (including written standard operating procedure) with the Massachusetts Department of Public Health (DPH) to routinely review and follow-up with the local public water supplier and the homeowner on all DPH drinking water results from the homes of children with elevated blood lead levels. The results of this effort are reported to EPA in DEP's annual LCCA report as well as routine Performance Partnership Agreement reports.

- ✓ DEP works with schools that are non-transient non-community public water suppliers whose drinking water exceeds lead action levels. This work involves providing educational material, training, and one-on-one consultation with school officials and enforcement if necessary. DEP also works with any other schools known to have elevated lead levels to mitigate exposure to children. This work involves providing educational material, training, and one-on-one consultation with school officials and their local water supply, health, and plumbing official as needed.

- ✓ DEP, in conjunction with its' Massachusetts co-designee for the LCCA, the Massachusetts Departments of Public Health and Education, continues to provide school administrators, public health officials, public water suppliers, plumbing inspectors and other interested parties with educational materials and recommendations to assist in the schools' efforts to reduce the levels of lead and copper in their drinking water.

- ✓ As part of the DEP's on going strategy to educate and provide training to school officials on the issue of lead in drinking water, on March 30, 2004 the DEP Commissioner sent out an information package to all Massachusetts Superintendents of Public Schools, Private and Parochial School Principals, and Collaborative Directors. The package was also sent electronically to all Public Water Superintendents and day care providers.

An electronic copy of the mailed information as well as several other useful documents are available at http://mass.gov/dep/brp/dws/lead.htm. The information includes the following:

- A cover letter entitled "Lead in School Drinking Water". The cover letter explains the health hazards associated with lead. It identifies the types of actions that school officials and principals should take to determine if water outlets (taps and fountains) exceed lead action levels. It also identifies types of corrective action. (See http://mass.gov/dep/brp/dws/lead.htm.)

- A summary report for schools to complete entitled "Lead in Schools Drinking Water Maintenance Checklist". This evaluation tool is for school principals, custodians or other responsible parties. The DEP Commissioner requested that the checklist be completed and sent back to DEP for evaluation. Checklist results will be analyzed for findings and shared with EPA and the Departments of Education and Public Health to allow for appropriate follow-up action. (See http://mass.gov/dep/brp/dws/lead.htm.)

- Invitation to a seminar entitled "Lead in School Drinking Water". The seminar is designed for school superintendents and local health officials, water system owners and operators and will be given at no charge in four different locations throughout the state. (See http://mass.gov/dep/brp/dws/lead.htm.)

- A technical assistance materials information sheet was also provided. The information sheet included all EPA/DEP web sites references for lead in drinking water as well as the Safe Drinking Water Hotline phone number.

- A copy of the EPA document entitled "Are You Providing Safe Drinking Water at Your School?"

- A DEP document entitled "Recommended Remediation Actions to Reduce or Eliminate Lead Exposure from Drinking Water".

✓ DEP will author a brief article for an annual email/newsletter update to schools on the subject of lead in drinking water. DOE has an email/newsletter that will be used.

✓ DEP will author an annual article for inclusion in the Massachusetts Board of Health (MBOH) newsletter on the subject of lead in drinking water.

✓ DEP will include a 1-2 hour training segment on "Lead in School Drinking Water" during the DWP annual cross-connection training for public water systems and plumbing inspectors. (May of each year)

✓ DEP will continue to work on special initiatives with local water departments and school districts to assist in the development and maintenance of school drinking water abatement programs.

✓ DEP will continue to report to EPA on the status of its LCCA actions in April-May of each year.

✓ The current team (DEP, DOE, DPH and Boston Health Commission) will continue to communicate and coordinate to ensure that there is an on-going effort to reduce the levels of lead in drinking water in schools. The Boston Health Commission is included because EPA has noted that Boston has the highest level of lead-poisoned children in the Commonwealth.

✓ DEP will continue to use its quarterly newsletter, broadcast email, and web page to provide access to information on the issue of lead in schools and other drinking water requirements that impact schools.

✓ DEP will use the Massachusetts Department of Education and Massachusetts Office of Children newsletter and web page to provide information on the issue of lead in schools and other drinking water requirements that impact schools.

✓ DEP will continue to require all public water supply systems, subject to the Lead and Copper Rule (LCR), to collect and analyze one sample from 2 schools each monitoring period required under the LCR.DEP will continue to use the results of these tests to identify schools for education and assistance.

✓ DEP will evaluate the possibility of using the DWP sanitary survey program and third party technical assistance providers to encourage local public water systems to actively work with their local schools on all drinking water compliance issues. (E.g. lead in drinking water, cross-connections, etc.)

- ✓ DEP will identify and apply for grants to provide additional assistance to schools to help them continue to evaluate and correct any drinking water problems.

It is the intention of DEP to continue to work cooperatively with EPA, Massachusetts Departments of Education and Public Health, Massachusetts Plumbing Board, Massachusetts Office of Children, Massachusetts Boards of Health Association, Boston Health Commission and any other groups or organizations that can assist in protecting public health.

If you have any questions on any of the DEP initiatives/activities or this information, please contact Yvette De Peiza of my staff at 617.292.5857 or Yvette.depeiza@state.ma.us.

Sincerely,

(Signed copy on file in Boston DEP Office)

David Y. Terry, Program Director
Drinking Water Program

Attachments
cc: Ms. Jane Downing, Associate Director for Drinking Water and Groundwater, EPA Region 1
Kevin Reilly, EPA Region 1
David P. Driscoll, Commissioner Department of Education
Christine Ferguson, Commissioner Department of Public Health
Robert W. Golledge, Jr., Commissioner Department of Environmental Protection
Cynthia Giles, DEP/BRP
Glenn Haas, DEP/BRP

Y/DWParchive/Lead in schools- EPA report to Cynthia Dougherty-2004-05-06

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

April 21, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
United States Environmental Protection Agency
Washington, DC 20460

Dear Mr. Grumbles:

SUBJECT: State Programs to Control Lead in School Drinking Water

Thank you for your letter of March 18, 2004, requesting information on efforts being taken by the Michigan Department of Environmental Quality (MDEQ) to control lead in drinking water at schools and day care facilities. The following information has been assembled by staff in our Water Division (WD) having the regulatory responsibility for public water systems.

The WD continues to actively implement the requirements of the Lead and Copper Rule (LCR) authorized by the 1986 amendments to the federal Safe Drinking Water Act, 1976 PA 399, as amended. In Michigan, we have approximately 900 schools and day care centers that meet the definition of a nontransient noncommunity (NTNC) public water system. All of these systems rely on groundwater as their source. Fortunately, groundwater in Michigan is not typically corrosive or conducive to significant lead leaching from water system components.

As specified by the LCR, routine monitoring for lead and copper has been and continues to be conducted in these NTNC systems. Our experience has shown lead levels to be acceptable in these schools and day care centers when samples have been correctly collected from actual drinking water taps. From 1999 to 2003, the MDEQ laboratory analyzed 14,207 lead samples from NTNC public water systems. Only 2.4 percent of these sample results exceeded the lead action level of 15 parts per billion (ppb). Over 94 percent of these results reported lead levels less than or equal to half the lead action level of 7.5 ppb, with 37 percent reporting lead as not detected. On the rare occasion that one of these NTNC systems exceeded the lead action level, the owners have typically eliminated exposure by supplying bottled water or removing the offending tap until a long-term solution has been instituted. Rarely have the elevated lead levels been attributed to a system-wide problem. In Michigan, it has been repeatedly demonstrated that elevated lead levels from drinking water taps in schools are diminished by fixture replacement. In the last 5 years, we have had only 10 action level exceedences reported from a total of 1,750 NTNC public water systems. Only two of these systems have had to install corrosion control treatment.

In your letter, you state that schools are only subject to the requirements of the LCR if they have their own water system. This statement implies there is no benefit to those schools served by community public water systems. The WD feels strongly that the LCR does provide a significant benefit to schools and day care centers that are served by community public water systems (CPWS). Despite limitations in these regulations that severely restrict CPWS from using schools and day care centers as sampling sites, proper implementation of this regulation should result in reduced lead exposure for all customers. For instance, schools and day care centers connected to CPWS serving more than 50,000 residents benefited from the LCR because these water systems have had to demonstrate and maintain optimal corrosion control. These large systems were required to reduce lead levels throughout their water system to the lowest levels possible. In addition, schools and day care centers connected to CPWS serving 50,000 or fewer residents have benefited from proper implementation of the LCR because these water systems have had to achieve and maintain compliance with the lead action level. Furthermore, any CPWS that exceeded a lead action level also had to provide public notification and public service announcements in accordance with and on a frequency specified by the LCR. Therefore, schools and day care centers in these systems could choose to provide an alternate drinking water source until compliance was achieved and lead levels were reduced in their CPWS.

Your letter also references the Lead Contamination Control Act (LCCA) of 1988, which recalled drinking water coolers with lead-lined water reservoir tanks and banned new drinking water coolers with lead parts. This law caused Michigan's state plumbing board to make changes in the construction code to ban lead materials in other drinking water system components as well. Items such as 50/50 lead-tin solder for household plumbing, lead packers and lead wool used for well screens, and brass fixtures having greater than 8 percent lead were among the items banned from future use in potable water systems.

In 1988, prior to the LCCA, NTNC schools in Michigan were informed of the requirement to provide public notice regarding the potential for lead in drinking water, and they were mailed an example notice to use. All Michigan schools supplied by CPWS were also mailed the same information with a recommendation that they provide similar public notice although it was not required by law.

In 1989, over 8,000 Michigan schools and day care centers were mailed information on the LCCA. We cited concerns about lead levels and recommended a sampling and flushing protocol be instituted at all taps used for consumption, not just the water coolers required by the LCCA. In addition, staff of the WD made presentations to state school business officials and to the environmental health association representing local health departments. Articles were also published in school and day care association newsletters.

In 1989, we also conducted a random telephone survey of 40 schools and 40 day care centers (both NTNC and those connected to another water system) regarding the LCCA. Seventy-five percent of the schools were aware of the LCCA requirements and 50 percent had performed some monitoring, while 40 percent of the day care centers were aware of the LCCA requirements, and about 20 percent had sampled.

In 1990, a second mailing to all 8,000 schools and day care centers was conducted, with updated information on the recall of water coolers as required by the LCCA and with the recommendations developed in Michigan on flushing drinking water outlets. In this letter, we also asked that any sample results be reported to us even though they were specifically not required to do so by the LCCA. About 30 of 500 school districts reported results from 720 "first draw" samples taken in over 200 buildings; 2.5 percent of these results exceeded the maximum contaminant level (MCL) of 50 ppb in effect at that time for lead, 8.6 percent exceeded 20 ppb, and 17.5 percent exceeded 10 ppb. It should be noted that all (104) flushed sample results reported lead levels less than 10 ppb. We also noted that the overall average levels in first draw samples collected from kitchen faucets were higher than levels from the targeted lead lined water coolers that were the focus of the LCCA. As a result of this data, state staff did pilot testing in three school districts and provided technical assistance to schools and day care centers. Follow-up sampling and investigations were also accomplished by state staff in other school districts.

As you mentioned, the LCCA also established a technical assistance program to support state activities to reduce lead contamination in schools. The WD is aware of the United States Environmental Protection Agency (USEPA) technical assistance fact sheets, technical bulletins training seminars, and the publication, "Lead in School Drinking Water." As discussed, we conducted several mailings, made numerous presentations, conducted follow-up surveys, responded to requests for assistance, participated in several pilot tests to reduce lead levels, compiled data, conducted additional sampling, and responded to many telephone inquiries with appropriate technical assistance. All of these activities constitute our technical assistance program. However, no funding has ever been allocated to states for implementation of the LCCA. All of the activities performed by Michigan in response to the requirements of the LCCA were done so with resources diverted from other programs. The primary requirement of the LCCA was for schools that identified coolers on a list of those suspected to contain lead lining to repair, replace, remove, or sample to show that these coolers did not contribute to lead in the drinking water. If the schools did sample, they were also required to tell their customers that results were available. If schools had no coolers on the list, nothing further was required by the LCCA. Despite this limited application of the LCCA, Michigan has performed numerous activities beyond the scope specified in the LCCA without any federal funding.

Finally, you ask what the USEPA can do to further efforts in this voluntary program. We have several suggestions. First, we recommend that the USEPA consider allowing schools to be considered Tier 1 sampling sites in CPWS so that we can gain more information on possible lead exposure in schools. Allowing CPWS to use schools will afford them an opportunity to use sampling sites that are more accessible than private homes, more likely to be geographically distributed throughout their system, and likely to satisfy a large constituency (parents). From our experience, we also recommend that the USEPA consider a sampling protocol for schools that would determine if the fixtures at kitchen taps are a problem that could be simply resolved by replacement. The USEPA may also want to consider requiring the owner of these facilities to replace any remaining lead service lines supplying schools or day care centers.

In conclusion, we understand that the detection of elevated lead levels at customer taps in Washington, DC, has caused the USEPA to focus on this issue. However, the MDEQ wants to emphasize that despite the limitations in this law, proper implementation of the LCR accomplishes adequate reduction in lead levels. Failure to carry out some rule provisions in one case should not be cause for disparaging implementation across the country, or for unnecessary revamping of this regulation. If you need further information or assistance, please contact Mr. James K. Cleland, Assistant Division Chief, WD, at 517-241-1287, or you may contact me.

Sincerely,

Steven E. Chester
Director
517-373-7917

cc: Mr. Stanley F. Pruss, Deputy Director, MDEQ
Mr. Jim Sygo, Deputy Director, MDEQ
Ms. JoAnn Merrick, Senior Executive Assistant to the Director, MDEQ
Mr. Andrew W. Hogarth, MDEQ
Mr. Richard A. Powers, MDEQ
Mr. James K. Cleland, MDEQ

MINNESOTA
MDH
DEPARTMENT OF HEALTH

Protecting, maintaining and improving the health of all Minnesotans

April 5, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
Office of Ground Water and Drinking Water
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Mr. Grumbles:

Subject: State Programs to Control Lead in School Drinking Water

In response to your correspondence regarding programs to control lead in drinking water at schools and day care facilities, we are pleased to provide you a summary of Minnesota's efforts in this area.

All schools in Minnesota, both public and private, receive written guidance materials every five years regarding the reduction of lead in drinking water. These guidance materials have been developed by the Minnesota Department of Health (MDH) in cooperation with the Minnesota Department of Education (MDE), and provide detailed lead testing instructions and options for corrective action. A copy of the guidance materials is enclosed. This information is also available on the internet at: http://www.health.state.mn.us/divs/eh/water/schools/. Although the actions described in these materials are voluntary, adoption has been aided by our partnership with the MDE, which has strongly encouraged schools to implement these recommendations.

Guidance materials were most recently sent to all Minnesota schools in May 2000. We are currently planning to revise and distribute materials again in 2005, and are considering extending the distribution to include licensed day care centers. In addition to the distribution of these written materials, the MDH staff are available to provide guidance and technical assistance to Minnesota's schools in reducing lead in drinking water.

In addition, the MDH has made many other efforts to reduce lead in drinking water in general, as well as in schools specifically. These efforts include: continued implementation of the Lead and Copper Rule (for all public water systems, including schools using their own water supply), the passage of a "Lead Ban" in 1985 which restricted lead content in plumbing materials, research regarding the effectiveness of flushing in reducing lead in school drinking water, and implementation of the Lead Contamination Control Act to assure the testing and/or removal of water coolers with lead components.

The MDH has also had a general education campaign in place for over ten years that urges the public to "Get the Lead Out" by taking simple steps to reduce lead in drinking water. Examples include letting the water run before use and not using water from the hot water tap for food and beverage preparation. This campaign has been implemented above and beyond the public education requirements of the Lead and Copper Rule. Its messages have been widely distributed by a variety of methods, including: fact sheets, press releases, interviews, newsletters, the internet, and printing on shopping bags and magnets.

The efforts to reduce lead in drinking water are part of the MDH overall approach to address lead issues and to work with schools regarding environmental health. Other programs within the MDH address areas such as tracking children's blood lead levels and working with contractors and homeowners to prevent exposure from lead paint through an EPA Lead Enforcement Cooperative Agreement. Additionally, our staff have worked closely with schools as part of our EPA Tools for Schools Cooperative Agreement to address indoor air quality and improve the students' overall learning environment.

We continue to welcome any collaboration with the United States Environmental Protection Agency in improving our programs to reduce lead in school drinking water. If you have any questions, please contact Dave Hokanson at 651/215-0753 or Stew Thornley at 651/215-0771.

Sincerely,

Dianne M. Mandernach

Dianne M. Mandernach
Commissioner
P.O. Box 64882
St. Paul, Minnesota 55164-0882

Enclosures

REDUCING LEAD IN DRINKING WATER:

Important Information for Minnesota's Schools

Minnesota Department of Health
Section of Drinking Water Protection

Minnesota Department of Children, Families, and Learning
Division of Management Assistance

Why Is Lead a Health Concern?

Lead is a toxic material, known to be harmful to human health if ingested or inhaled. Lead in the body can damage the brain, kidneys, nervous system and red blood cells. Children, infants, pregnant women and their unborn children are especially vulnerable to lead. In children, lead has been associated with impaired mental and physical development, as well as hearing problems. The harmful effects of lead in the body can be subtle and may occur without any obvious signs of lead poisoning.

Blood lead levels as low as 10 micrograms per deciliter (µg/dL) can have harmful effects on children's learning and behavior. In 1997, the Centers for Disease Control and Prevention (CDC) estimated that 890,000 children in the United States had blood lead levels greater than or equal to 10 µg/dL. Reducing any and all sources of exposure to lead can help reduce the number of children with elevated blood lead levels.

How Are Children Exposed to Lead?

Lead in the Environment:

Children can be exposed to lead in many ways. Before lead's negative impacts on health were discovered, it was used in paint, gasoline, plumbing components, and many other products. Children may be exposed to lead in such sources as: lead-based paint found in pre-1978 housing, lead-contaminated dust and soil, drinking water, and lead-containing materials used in parental occupations and hobbies. It is important to consider all these sources when determining a child's overall exposure to lead because several lower sources of lead may potentially add up to a significant total exposure.

Lead in Drinking Water:

Drinking water is not typically the greatest source of lead for children, but it can contribute to total lead exposure (see list below). Reducing the amount of lead in drinking water is an important part of reducing a child's overall exposure to lead in the environment.

Common Sources of Lead

Lower Doses

Drinking water
Air

Higher Doses

Lead-contaminated household dust

Dust and chips from exterior lead-based paint removal

Dust and chips from interior lead-based paint removal

Lead-contaminated soil

Industrial sources of lead

Lead-containing materials used in parental occupations or hobbies

Adapted from Lead Poisoning and Children (MDH/Freshwater Foundation 1992)

Why is Lead A Special Concern for Schools?

Children Are More Vulnerable to Lead:

Amounts of lead that won't hurt adults can slow down the normal physical and mental development of growing bodies. Children will also more rapidly absorb any lead they consume. In addition, children at play come into contact with more sources of lead - such as dirt and dust - than do adults.

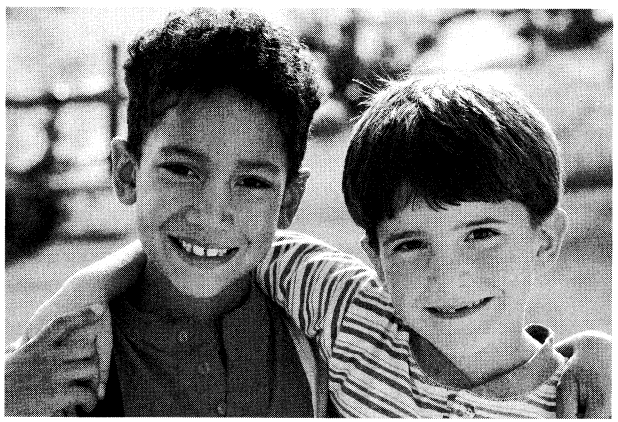
Water Use Patterns at Schools:

The "on-again, off-again" water use patterns of most schools can result in elevated lead levels in drinking water. Water that remains stagnant in plumbing overnight, over a weekend, or during a vacation is in longer contact with lead pipes or lead solder and may therefore contain higher levels of lead.

How Does Lead Get into Drinking Water?

Lead generally enters drinking water from a building's plumbing system. Lead may be present in various parts of the plumbing system (such as lead solder, brass fixtures, and lead pipes) and is picked up by the water passing through the plumbing system. The amount of lead, if any, in a plumbing system will depend on the materials from which the system was constructed. Even new plumbing fixtures can leach lead into the drinking water.

The amount of contact time between water and any lead source is the greatest contributing factor to lead in drinking water. The longer water remains standing in the plumbing system, the more lead it can absorb from any lead sources present. For this reason, the lead concentration is at its highest when water has remained unused overnight or over a weekend. Additionally, factors such as water chemistry and temperature can affect the rate at which water absorbs lead.



How Much Lead In Drinking Water Is Too Much?

The United States Environmental Protection Agency (US EPA) recommends that school drinking water not exceed 20 parts per billion (ppb) of lead. However, all schools should seek to reduce the amount of lead in drinking water to as close to zero as possible.

What Can Be Done to Reduce Lead Levels in Drinking Water?

Use Only Cold Water for Drinking and Food Preparation:

Hot water is likely to contain higher levels of lead than cold water. Only water from the cold water tap should be used for drinking, preparing juice, mixing baby formula, or cooking. Boiling the water will not remove the lead and may increase the concentration of lead in the water.

Flush Taps Before Use:

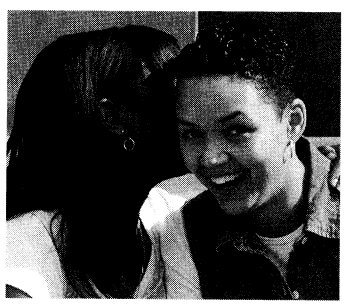
Until a tap is tested, drinking water should be assumed to contain lead, and the water at these taps should be flushed twice a day (in the morning and at midday). The more time water has been standing in the school's plumbing system, the more lead it may contain.

Test the Water for Lead:

The only way to determine how much lead is present in the drinking water at your school is to have the water tested for lead. Water at each tap or fixture providing water for drinking or cooking purposes should be tested for lead at least every five years. For instructions on how to conduct testing for lead in school drinking water, see the booklet "Reducing Lead in Drinking Water: A Guidance Manual for Minnesota's Schools", which is available from the Minnesota Department of Health (MDH).

Select Permanent Actions to Reduce Lead:

If testing reveals that a school's drinking water contains 20 parts per billion or more of lead, the school should choose how it plans to reduce lead levels on a long-term basis. These actions may include: continued twice daily flushing, removing or replacing taps, repairs to the plumbing system, water treatment, or a new water source.



Where Can I Get More Information About Lead In Drinking Water?

Detailed recommendations for addressing lead levels in school drinking water are provided in the publication "Reducing Lead in Drinking Water: A Manual for Minnesota's Schools". This manual and other resources are available from the Minnesota Department of Health, Section of Drinking Water Protection, by calling 651/215-0770.

If you have further questions, please contact the following agencies:

Minnesota Department of Health
Section of Drinking Water Protection
651/215-0770
www.health.state.mn.us

Minnesota Department of Children, Families, and Learning
651/582-8748
www.cfl.state.mn.us

Additional Resources:

Minnesota Department of Health, Lead Program
651/215-0890
www.health.state.mn.us

United States Environmental Protection Agency:

- Office of Ground Water and Drinking Water
  www.epa.gov/OGWDW
- Lead Programs
  www.epa.gov/lead/leadpbed.htm
- National Lead Information Center
  1/800/424-LEAD
- Safe Drinking Water Hotline
  1/800/426-4791

To request this document in another format, such as Braille, large print or cassette tape, call 651/215-0770; TDD 651/215-0707 or call the Minnesota Relay Service toll-free at 1/800/627-3529 (ask for 651/215-0770).

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Reducing Lead in Drinking Water:
A Manual for Minnesota's Schools

MINNESOTA MDH DEPARTMENT OF HEALTH
Minnesota Department of Health
Section of Drinking Water Protection

Minnesota Department of Children,
Families, and Learning
Division of Management Assistance

MINNESOTA DEPARTMENT OF Children, Families & Learning

REDUCING LEAD IN DRINKING WATER: A MANUAL FOR MINNESOTA'S SCHOOLS

CONTENTS Page

For more information, see back cover or write:

Minnesota Department of Health
Section of Drinking Water Protection
P.O. Box 64975
St. Paul, MN 55164-0975

INTRODUCTION

What Is The Purpose of This Manual?

This manual was designed to assist Minnesota's schools in minimizing the consumption of lead in drinking water by students and staff. Following are step-by-step instructions for testing and reducing lead in drinking water.

Who Should Read This Manual?

This manual is intended for use by all public and private schools in Minnesota. School administrators should review this manual and implement activities to reduce lead levels at all taps used for drinking water or in food preparation. The specific instructions provided regarding testing and corrective actions are designed for school health, safety, and maintenance personnel, as well as any consultants working with educational agencies to reduce lead levels in drinking water.

WHY WORRY ABOUT LEAD IN SCHOOLS?

Why Is Lead A Health Concern?

Lead is a toxic material, known to be harmful to human health if ingested or inhaled. Lead in the body can damage the brain, kidneys, nervous system and red blood cells. Children, infants, pregnant women and their unborn children are especially vulnerable to lead. In children, lead has been associated with impaired mental and physical development, as well as hearing problems. The harmful effects of lead in the body can be subtle and may occur without any obvious signs of lead poisoning.

Blood lead levels as low as 10 micrograms per deciliter (μg/dL) are associated with harmful effects on children's learning and behavior. In 1997, the Centers for Disease Control and Prevention (CDC) estimated that 890,000 children in the United States had blood lead levels greater than or equal to 10 μg/dL. Reducing any and all sources of exposure to lead can help reduce the number of children with elevated blood lead levels.

How Are Children Exposed to Lead?

Lead in the Environment

Children can be exposed to lead in many ways. Before action was taken to reduce lead in the environment, it was used in paint, gasoline, plumbing components, and many other products. Children may be exposed to lead in such sources as: lead-based paint found in pre-1978 housing, lead-contaminated dust and soil, drinking water, and lead-containing materials used in adult occupations and hobbies. It is important to consider all these sources when determining a child's overall exposure to lead, because several lower amounts of lead may potentially add up to a significant total exposure.

Lead in Drinking Water

Drinking water is not typically the primary source of lead exposure for children, but it can contribute to total lead exposure (see table below). Reducing the amount of lead in drinking water is an important part of reducing a child's overall exposure to lead in the environment.

Common Sources of Lead

Lower Doses
- Drinking water
- Air

Higher Doses
- Lead-contaminated household dust
- Dust and chips from exterior lead-based paint removal
- Dust and chips from interior lead-based paint removal
- Lead-contaminated soil
- Industrial sources of lead
- Lead-containing materials used in adult occupations or hobbies

Adapted from *Lead Poisoning and Children* (MDH/Freshwater Foundation 1992)

Why is Lead A Special Concern for Schools?

Children Are More Vulnerable to Lead

Amounts of lead that won't hurt adults can slow down the normal physical and mental development of growing bodies. Growing children will also more rapidly absorb any lead they consume. In addition, children at play come into contact with more sources of lead – such as dirt and dust – than do adults.

Water Use Patterns at Schools

The "on-again, off-again" water use patterns of most schools can result in elevated lead levels in drinking water. Water that remains stagnant in plumbing overnight, over a weekend, or during a vacation is in longer contact with plumbing materials and may therefore contain higher levels of lead.

How Does Lead Get into Drinking Water?

Lead generally enters drinking water from a building's plumbing system. Lead may be present in various parts of the plumbing system (such as lead solder, brass fixtures, and lead pipes) and is picked up by the water passing through the plumbing system. The amount of lead, if any, in a plumbing system will depend on the age of the system and the materials from which the system was constructed.

The amount of contact time between water and any lead source is the greatest contributing factor to lead in drinking water. The longer water remains standing in the plumbing system, the greater the potential for it to absorb lead from any lead sources present. For this reason, the lead concentration is at its highest when water has remained unused overnight or over a weekend. Additionally, factors such as water chemistry and temperature can affect the rate at which water absorbs lead.

How Much Lead In Drinking Water Is Too Much?

The United States Environmental Protection Agency (US EPA) recommends that school drinking water not exceed 20 parts per billion (ppb) of lead. However, all schools should seek to reduce the amount of lead in drinking water to as close to zero as possible.

What Can Be Done To Reduce Lead Levels In Drinking Water?

You can do three things to reduce lead levels in drinking water:

1 *Use Only Cold Water for Drinking and Food Preparation.*
Hot water is likely to contain higher levels of lead than cold water. Only water from the cold water tap should be used for drinking, preparing juice, mixing baby formula, or cooking. Boiling the water will *not* remove the lead and may increase the concentration of lead in the water.

2 *Flush Taps Before Use.*
The more time water has been standing in the plumbing system, the more lead it may contain. Running water at a tap, usually for 2-3 minutes, prior to using it for drinking or food preparation will often reduce lead levels in the water. Lead in drinking water is typically an "endpoint" problem, with the highest concentrations of lead near the tap. Flushing works by removing water with the most lead from the drinking water system.

Until a tap is tested, drinking water should be assumed to contain lead, and the water at these taps should be flushed twice a day (in the morning and at midday).

3 *Test the Water for Lead.*
The only way to determine how much lead is present in the drinking water at your school is to have the water tested for lead. Each tap or fixture providing water for drinking or cooking purposes should be tested for lead at least every five years. Corrective action should then be taken at taps with elevated lead levels.

More detailed instructions on testing water for lead and information about corrective actions can be found on page 8.

Legal Background and Requirements

The following two federal laws currently pertain to lead in school drinking water:

The Lead Contamination Control Act (LCCA) of 1988

This law applies to all schools, whether they purchase water from a water utility (i.e. city or rural water) or they supply their own water (i.e. well). The intent of the LCCA is to identify and reduce lead in drinking water at schools and day care facilities. It relies on voluntary compliance by individual schools and school districts. The United States Environmental Protection Agency (US EPA) developed guidelines to assist schools in reducing lead in drinking water. In this 1994 document, "Lead in Drinking Water in Schools and Non-Residential Buildings," the US EPA recommended a lead limit of 20 ppb for school drinking water, based on 250 ml first draw samples. The MDH document you are currently reading is based on the US EPA document and the requirements of the LCCA. If you would like a copy of "Lead in Drinking Water in Schools and Non-Residential Buildings," you may request one from MDH (see contact information on the back cover of this booklet).

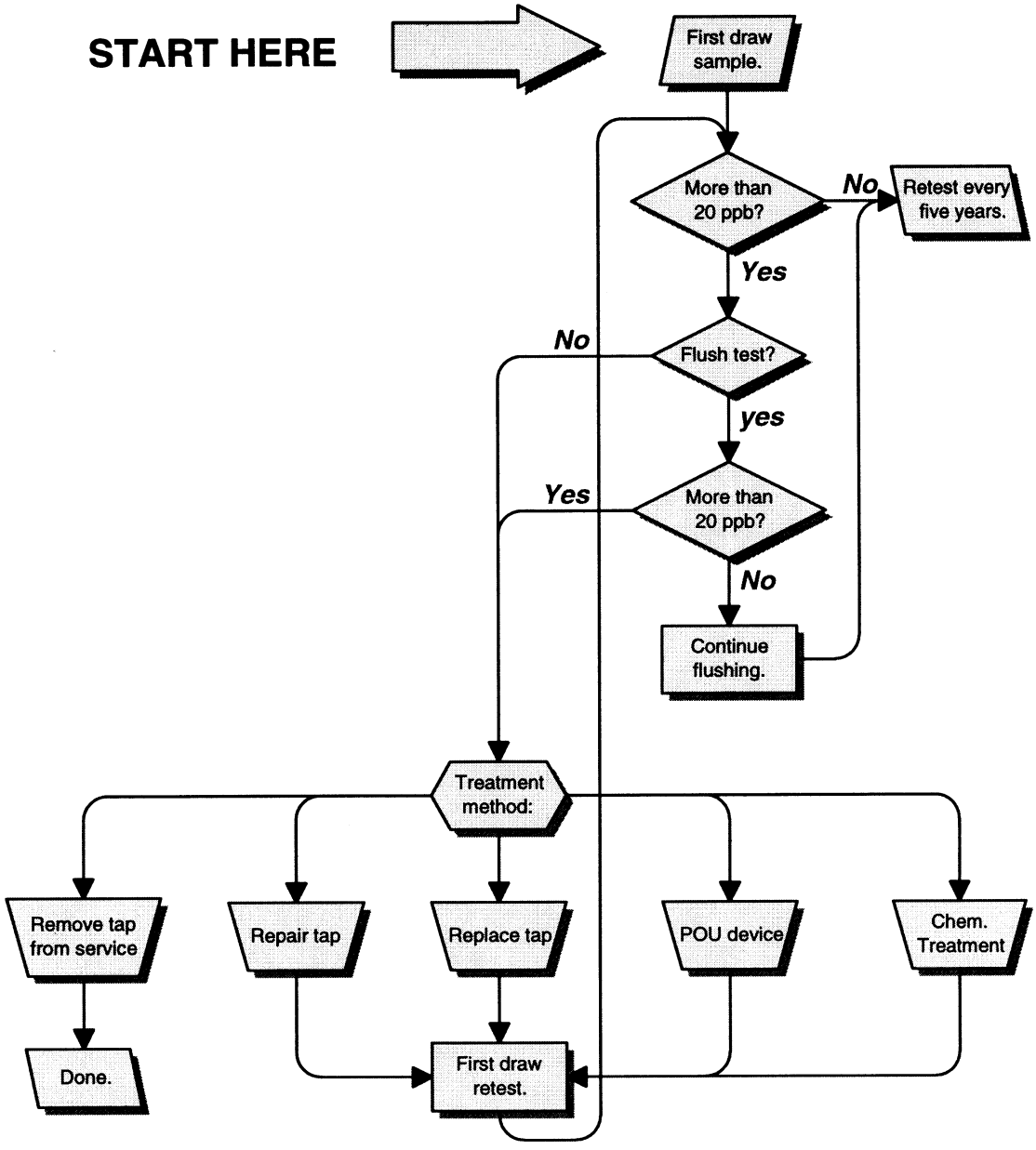
The Safe Drinking Water Act (SDWA), Lead and Copper Rule

This law applies only to schools that provide their own water supply. Compliance with the Lead and Copper Rule is mandatory for those schools that supply their own water. Under the Lead and Copper rule, no more than ten percent (10%) of the samples from a school's drinking water taps may exceed the lead "action level" of 15 ppb. The "action level" is the level at which action must be taken to protect the public health. If the "action level" is exceeded, the school is legally required to take corrective action. A one liter (1000 ml), first draw, cold water sample is used for monitoring under the Lead and Copper Rule (note that this volume is different than that for sampling recommended in this document).

Please note that schools providing their own water are affected by both the LCCA and the Lead and Copper Rule. You may consult with the MDH for assistance in understanding and complying with both of these laws.

Testing for Lead in School Drinking Water

The process of testing for lead in drinking water is explained in detail on the following pages.



Detailed Instructions

Step 1: Flush Taps

Flushing the drinking water taps (letting them run) often works to reduce lead in drinking water.

> *Until lead testing has been done, each water tap used for drinking or food preparation should be flushed twice each day the school is in use (in the morning before school begins and at midday).*

Flushing consists of opening a tap or combination of taps to clear standing water that has been in contact with components of the plumbing system that may contain lead. A school's water system can be flushed in two ways:

1 *Flush Individual Drinking Water Taps*

Running the water for 2-3 minutes at each drinking water tap will, in most cases, remove water that has been in contact with lead-containing plumbing materials. This type of flushing is frequently effective because lead sources are often contained in plumbing within the tap or very near the tap. Please note that refrigerated water coolers will take much longer to flush than other taps, because flushing must be long enough to remove all water from the cooling tank in the unit (this may take up to 15 minutes).

OR

2 *Flush Main Pipes, Then Flush Individual Drinking Water Taps*

Do this when: 1) many taps in an area will need to be flushed, or 2) it is believed that there are lead sources throughout the plumbing system, a more extensive method of flushing is appropriate. In these situations, water should first be flushed from the drinking water tap which is furthest from the water source on the main pipe(s). Water at this tap should be flushed for ten (10) minutes unless the time needed to clear water from the main pipes of the plumbing system has been specifically calculated (plumbing diagrams, flow rates, and other system information can be used to calculate the time needed for flushing). Next, all other drinking water taps need to be flushed long enough to remove water from those taps back to the primary flushed line.

> *Flushing alone should not be used as a substitute for testing. The only way to identify and correct lead problems is to test for lead in drinking water. Testing instructions are given on the following pages.*

Step 2: Test Taps

Water from all taps used for drinking or food preparation should be tested for lead, using "first draw" samples. "First draw" means that the samples are to be collected before the fixture is used or flushed during the day. US EPA recommends that water should sit in the pipes unused for at least 8 hours (but not more than 18 hours) before a sample is taken. Use only cold water for collecting lead samples.

Collecting the sample

- Sample Size: 250 ml

- Analytical Laboratory: Only laboratories certified to analyze lead in drinking water should be used. A list of these laboratories is provided at the end of this document. The laboratory will provide you with sample bottles and instructions for submitting samples.

- Field Test Kits: A type of field test kit is now available that uses a method certified by US EPA for lead analysis (anodic stripping voltammetry method). If you are interested in using a field test kit, contact MDH for assistance.

Interpreting first draw results

- Make sure your results are in parts per billion (ppb). See the Glossary on page 13 to convert from other units to ppb.

- If lead is at or below 20 ppb, no flushing is required for the tap (except for schools using their own water supply with exceedances under the SDWA Lead and Copper Rule). The tap may continue to be used for drinking water and should be retested in five years.

- If lead exceeds 20 ppb, continue the twice daily flushing. Go to "Step 3: Flushing and Retesting" to ensure that flushing is effective and that lead levels remain below 20 ppb.

- Test results more than five years old may not be valid. All taps should be sampled on a five year frequency or sufficient samples should be taken over time within a building to show consistent low readings. If sampling is to be spread over several years, then testing should first be done for drinking water taps used by younger children and pregnant women.

Step 3: Flushing and Retesting

Each tap that exceeds the 20 ppb lead standard is to be flushed in the morning and retested near lunchtime, just prior to the midday flushing. This is to determine if lead levels rise above 20 ppb during a four to six hour period of use (taps may be used during the morning, before the midday sample is collected).

Interpreting midday results:

- If the midday test sample shows lead at or below 20 ppb, the tap can be used, but twice daily flushing must continue indefinitely, unless another type of corrective action (see Step 4) is implemented.

- If the midday test result excceds 20 ppb, flushing has not been effective. Either the flushing program should be altered (longer flush time, more thorough flushing, etc.) and re-evaluated, or the tap should be taken out of service until a corrective action (as discussed in Step 4) is taken. Once the corrective action is completed, the tap is to be retested (as discussed in Step 5) before it is used.

Step 4: Other Corrective Actions

Further corrective actions need to be implemented when midday samples exceed 20 ppb (following a morning flush). Corrective actions can also be taken to completely eliminate the need for flushing at any taps where first draw samples exceed 20 ppb. After a corrective action is implemented, the tap is to be retested (see Step 5) to ensure the lead level is reduced to 20 ppb or less.

Plans and specifications for the plumbing system may be useful for identifying the source of lead and, therefore, help in determining the appropriate treatment option.

Options for corrective action:

- Remove Tap From Service: If the tap is seldom used, it may be disconnected from the water supply line and be removed. However, you must first verify with your local/state plumbing or building code official that the tap is not required for code compliance.

- Replace Tap: A tap can be replaced with a new one if the existing tap is suspected to be the source of contamination. Many metallic taps, even new ones, may contain lead which can contaminate the water. Please check with the manufacturer to determine the lead content of the tap. To minimize the introduction of lead, the tap should meet National Sanitation Foundation (NSF) Standard 61. See the definitions section of this document for more information on "lead free" taps.

- Replacement and Repair: Replace suspected sources of lead, including lead pipe, lead solder joints, brass plumbing components, and brass faucets.

- Point-of-Use Water Treatment Device: A point-of-use water treatment device may be installed at taps which are exceeding 20 ppb of lead. The device should be approved as meeting NSF Standard 53, NSF Standard 58, or an equivalent standard. It should be installed, operated, and maintained in accordance with the manufacturer's recommendations.

- Chemical Treatment of the Water Source/New Water Source: Changing the water chemistry may reduce the amount of lead absorbed by the water. This may be done by adding a chemical to the water as it enters the building. Methods of chemical treatment include addition of a phosphate inhibitor or an adjustment to the water's hardness. Another way to change water chemistry is to connect to a new water source that is less corrosive, which will cause less lead to be absorbed by the water.

Step 5: Reassessment

All taps affected by a corrective action (from Step 4) should be retested after the corrective action has been implemented. A first draw sample should be taken, using the procedure outlined in Step 2.

Interpreting post-corrective action results:

- If the analysis shows lead is at or below 20 ppb, no further action is required, as long as the corrective action remains in place. The next sample should be collected within 5 years.

- If the analysis shows lead to be above 20 ppb, twice daily flushing is required, and 1) a midday sample as specified in Step 3 is to be collected to determine if flushing is effective, or 2) a new corrective action can be implemented followed by retesting as specified in Step 2.

GLOSSARY

First Draw Sample

The first water drawn from a tap after the water has sat undisturbed in the plumbing system for at least eight hours (or overnight). Usually, the water is collected immediately in the morning before it can be used for other purposes. It is then analyzed for lead.

Flush

Running the water at a tap or combination of taps to clear standing water from the plumbing system. Flushing is used to reduce the amount of lead present in water consumed from the tap. See page 8 for description of how flushing is conducted.

Flush Sample

A sample of tap water that has been collected following the flushing of a drinking water tap.

Lead Free

The Safe Drinking Water Act (SDWA) defines "lead free" as follows:

- For solders and flux: Does not contain more than 0.2 percent lead.
- For pipes, pipe fittings, and well pumps: Does not contain more than 8.0 percent lead.

Since 1986, only "lead free" pipe, solder, or flux may be used in the installation or repair of 1) public water systems or 2) any plumbing in a residential or non-residential facility providing water for human consumption, which is connected to a public water system. Note that "lead free" taps may still contain some lead. The definition of "lead free" only addresses the amount of lead in the product, and is not based on the amount of lead that will leach into water.

NSF Standard 61, a voluntary standard, does consider the amount of lead that will be leached into the water. Taps meeting NSF Standard 61 should not leach more than 11 ppb of lead.

Parts Per Billion (ppb)

A unit of measurement equal to one microgram per liter. This measurement is commonly used to describe the concentration of lead in drinking water.

1 part per billion (ppb) = 1 microgram per liter (μg/l)

1000 parts billion (ppb) = 1 part per million (ppm) = 1 milligram per liter (mg/l)

Tap

Point of access for people to obtain water for drinking or cooking. A tap can be a fixture, faucet, drinking fountain, or water cooler. Drinking water taps typically do not include bathroom taps, hose bibbs, or custodial closet sinks.

APPENDIX 1: CERTIFIED LABORATORIES

MINNESOTA LABORATORIES CERTIFIED TO ANALYZE LEAD IN DRINKING WATER*

Lab Name	Phone Number	Address
A.W. Research Laboratories	(218) 829-7974	2403 Airport Road Northeast, Brainerd, MN 56401
American Science Corporation	(651) 291-9472	11 Empire Drive, St. Paul, MN 55103
ASCI Corporation, Environmental Testing Division	(218) 722-4040	4444 Airpark Boulevard, Duluth, MN 55811
Blair Environmental Laboratories, Inc.	(612) 617-9584	425 Hoover Street NE, Minneapolis, MN
Braun Intertec Environmental	(612) 941-5600	6875 Washington Avenue South, Eden Prairie, MN 55439
Eagan Environmental Services	(612) 454-3310	3385 South Highway 149, Eagan, MN 55121
Eco-Agri Laboratories, Inc.	(320) 235-3927	3009 East Highway 12, Willmar, MN 56201
ERA Laboratories	(218) 727-6380	24 N. 21st Avenue West, Duluth, MN 55806-2017
Horizon Laboratories, Inc.	(651) 653-3471	4463 White Bear Parkway, Suite 105, St. Paul, MN 55110
Instrumental Research, Inc.	(612) 571-3698	7800 Main Street NE, Fridley, MN 55432
Interpoll Laboratories, Inc.	(612) 786-6020	4500 Ball Road N.E., Circle Pines, MN 55014
JT Testing Service	(612) 434-9634	14755 Palm Street, Andover, MN 55304
Lake Superior Laboratories	(218) 722-1911	728 Garfield Avenue, Duluth, MN 55802
Legend Technical Services, Inc.	(651) 642-1150	739 Vandalia Street, St. Paul, MN 55114
Midwest Analytical Services, Inc.	(612) 689-2175	330 South Cleveland Street, Box 349, Cambridge, MN 55008
Minneapolis Health Department	(612) 673-2160	250 South 4th Street, Minneapolis, MN 55415-1372
Minnesota Valley Testing Laboratories	(507) 354-8517	1126 North Front Street, P.O. Box 249, New Ulm, MN 56073
Natural Resources Research Institute Central Analytical Lab	(218) 720-4316	5013 Miller Trunk Highway, Duluth, MN 55811
Northeast Technical Services	(218) 741-4290	315 Chestnut Street, P.O. Box 1142, Virginia, MN 55792
NSP Testing Laboratory	(612) 630-4439	1518 Chestnut Avenue, Minneapolis, MN 55403
St. Paul-Ramsey County Department of Public Health	(651) 292-7721	555 Cedar Street, St. Paul, MN 55101
SERCO Laboratories	(651) 636-7173	1931 W. County Road C-2, St. Paul, MN 55101
Spectrum Labs, Inc.	(651) 633-0101	301 West County Road E2, New Brighton, MN 55112
Twin City Water Clinic	(612) 935-3556	617 13th Avenue South, Hopkins, MN 55343
University of Minnesota Research Analytical Laboratory	(651) 625-9713	1903 Hendon Avenue, St. Paul, MN 55108
Utility Consultants Laboratory	(507) 234-5835	129 North Main Street, Janesville, MN 56408
Water Laboratories, Inc.	(612) 441-7509	333 East Main Street, P.O. Box 388, Elk River, MN 55330

*This list is current as of December 1999. Lab certification status may change. You may contact MDH for an updated list.

APPENDIX 2: LEAD TESTING RECORD FOR SCHOOL DRINKING WATER

School Name: _____

Tap/Site Name	Initial "First Draw" Sample		Sample Following Morning Flushing* (If Needed)		First Draw Sample Following Corrective Action† (If Needed)		Comments
	Date	Result (in ppb)	Date	Result (in ppb)	Date	Result (in ppb)	

*Collected just before lunch period.
†Corrective action may include: fixture replacement, repair, installation of treatment device, new water source, or chemical treatment of water.

Where Can I Get More Information About Lead In Drinking Water?

For more information, contact one of the following agencies:

- Minnesota Department of Health, Section of Drinking Water Protection, 651/215-0770, www.health.state.mn.us
- Minnesota Department of Children, Families, and Learning, 651/582-8748, cfl.state.mn.us

Additional Resources:

- Minnesota Department of Health, Lead Program, 651/215-0890, www.health.state.mn.us
- United States Environmental Protection Agency, Office of Ground Water and Drinking Water, www.epa.gov/OGWDW
- United States Environmental Protection Agency, Lead Programs, www.epa.gov/lead/leadpbed.htm
- United States Environmental Protection Agency, National Lead Information Center, 1/800/424-LEAD
- Unites States Environmental Protection Agency, Safe Drinking Water Hotline, 1/800/426-4791

To request this document in another format, such as Braille, large print or cassette tape, call 651/215-0770; TDD 651/215-0707 or call the Minnesota Relay Service toll-free at 1/800/627-3529 (ask for 651/215-0770).

Minnesota Department of Health
Section of Drinking Water Protection
651/215-0770

141-0749
April 2000
Printed on recycled paper

MISSISSIPPI STATE DEPARTMENT OF HEALTH

April 23, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
Office of Ground Water and Drinking Water
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Dr. Brian Amy, State Health Officer, has requested that I respond to your letter of March 18, 2004, to assist you in learning more about our efforts to protect children from exposure to lead in drinking water at schools and daycare facilities.

The Mississippi State Department of Health's Division of Water Supply regulates lead in drinking water through compliance and enforcement of the Lead and Copper Rule. As was stated in your letter, only schools identified as public water supplies are subject to the requirements of the rule. Currently, 25 Mississippi schools are identified as meeting the EPA definition of a non-transient, non-community public water supply. Of these 25, only five are monitoring every six months as required when an action level is exceeded. These schools are located in the northern portion of the state in areas where it is not uncommon for the pH to be below 7. The Division of Water Supply is working closely with these systems to install appropriate treatment, make adjustments to existing treatment, or when feasible, connect to a community public water supply. The remaining 20 schools are monitoring on reduced schedules in accordance with the rule.

In response to the Lead Contamination Control Act (LCCA) of 1988, EPA provided guidance, testing protocols, and water cooler lists to state governments. The Mississippi State Department of Health Environmental Chemistry Laboratory in cooperation with the Department of Education, initiated analytical testing of schools. The results of the testing provided education officials an overall view of the schools likely to need remediation.

Today, most schools in Mississippi are connected to community public water supplies. This offers the added protection of Mississippi's Corrosion Control Law (enclosed) that requires systems providing corrosion control treatment to continuously provide the optimum pH of the treated water or dosage of corrosion inhibitor.

Brian W. Amy, MD, MHA, MPH, State Health Officer

570 East Woodrow Wilson • Post Office Box 1700 • Jackson, Mississippi 39215-1700
601/576-7634 • Fax 601/576-7931 • www.msdh.state.ms.us

Presently, only one daycare facility has been identified as meeting the requirements of a public water supply. This facility was tested for lead on October 3, 2000, with results below the detection limits. Of the remaining childcare facilities in Mississippi, the MSDH Lead Program Specialist performs lead testing. This specialist is contacted to perform environmental testing in response to children with elevated blood lead levels.

The most common lead hazards identified by the specialist in the facilities frequented by children with elevated blood lead levels have been lead based paint, plastic mini blinds purchased prior to 1997 and lead contaminated dust or soil.

The MSDH Office of Childcare Licensure and the Division of Water Supply are currently working together to identify the sources of drinking water for all daycare facilities in the state, paying specific attention to those utilizing private wells. Once identified, they will be prioritized and a plan developed to begin monitoring.

MSDH will also contact the Department of Education for a listing of schools. Staff of the Division of Water Supply will coordinate with superintendents and school officials to arrange monitoring. The initial focus will be on schools connected to community water supplies with no corrosion control treatment at the present time.

We look forward to addressing this important public health issue along with EPA. Should you have any questions or need further information about this program, please feel free to contact me at (601) 576-7680 or Melissa Parker, Director of Compliance & Enforcement, MSDH Division of Water Supply, at (601) 576-7518.

Sincerely,

Jim Craig, Director
Office of Health Protection

Enclosure

MISSISSIPPI LEGISLATURE REGULAR SESSION 2002

By: Representative McBride

To: Conservation and Water Resources

HOUSE BILL NO. 935
(As Sent to Governor)

AN ACT TO AMEND SECTION 41-26-8, MISSISSIPPI CODE OF 1972, RELATING TO THE MISSISSIPPI SAFE DRINKING WATER ACT TO REQUIRE THOSE PUBLIC WATER SYSTEMS PROVIDING CORROSION CONTROL TREATMENT TO PROPERLY MAINTAIN THE SYSTEM'S FACILITIES; TO PLACE A REPEALER ON SUCH REQUIREMENT; AND FOR RELATED PURPOSES.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI:

SECTION 1. Section 41-26-8, Mississippi Code of 1972, is amended as follows:

41-26-8. (1) The director shall exercise general supervision over the construction and operation of public water systems throughout the state. The general supervision shall include all of the features of construction and operation of public water systems which do or may affect the sanitary quality or the quantity of the water supply.

(2) (a) No person shall construct or change any community public water system or nontransient, noncommunity public water system until the plans for that construction or change have been submitted to and approved by the director. Plans for the construction or change must be prepared by a professional engineer registered in this state.

(b) In addition, each applicant for a new community public water system or nontransient, noncommunity public water system shall submit an operation and maintenance plan for review and approval by the director. The plan must be approved before beginning construction.

(c) In granting any approval under this section, the director may specify any modifications, conditions or limitations

as may be required for the protection of the public health and welfare.

(d) The director may also review the source of the water and the quantity of water to be withdrawn.

(e) Records of construction, including plans and descriptions of existing portions of a public water system, shall be made available to the department upon request.

(f) Each applicant for a new community public water system or nontransient, noncommunity public water system shall submit financial and managerial information as required by the public utilities staff. Following review of that information, the executive director of the public utilities staff shall certify in writing to the director the financial and managerial viability of the system if the executive director determines the system is viable. The director shall not approve the construction until that certification is received.

(g) The director shall not approve any plans for changes to an existing community public water system or nontransient, noncommunity public water system, if the director determines the changes would threaten the viability of the system or if the changes may overload the operational capabilities of the system.

(h) Those public water systems determined by the director to be appropriately providing corrosion control treatment shall effectively operate and maintain the system's water treatment facilities in order to continuously provide the optimum pH of the treated water or optimum dosage of corrosion inhibitor. This paragraph shall repeal on July 1, 2005.

(3) Each semi-public water system shall notify the department of its location, a responsible party and the number of connections served. The department shall, to the extent practicable, take appropriate actions to ensure that records on semi-public water systems are up-to-date. The board may require

water well drillers to provide information on wells drilled for use by semi-public water systems. The department shall at least annually collect a sample from each semi-public water system and shall analyze that sample at no cost to the semi-public water system for microbiological contaminants and any other contaminants deemed appropriate by the department. If the department finds levels of contaminants exceeding the Mississippi Primary Drinking Water Standards, the department shall notify the responsible party and shall provide technical assistance to the system to correct the problem. No semi-public water system shall be subject to the penalty provided under Section 41-26-31, Mississippi Code of 1972.

SECTION 2. This act shall take effect and be in force from and after July 1, 2002.

ST: Public water; require systems providing corrosion control treatment to properly maintain them.

Missouri Department of Health and Senior Services
P.O. Box 570, Jefferson City, MO 65102-0570 Phone: 573-751-6400 FAX: 573-751-6010
RELAY MISSOURI for Hearing and Speech Impaired 1-800-735-2966 VOICE 1-800-735-2466

Richard C. Dunn
Director

Bob Holden
Governor

April 13, 2004

Benjamin Grumbles
Acting Assistant Administrator
Office of Water
United States Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Mr. Grumbles:

This letter is in response to your request for information on Missouri's programs to control lead in school and child-care facility drinking water.

Missouri currently has a multi-tiered system to assure all citizens, including children attending schools and child-care facilities, are not exposed to lead in drinking water. Assuring safe drinking water in Missouri is a collaborative effort between the Missouri Department of Natural Resources (DNR), the Missouri Department of Health and Senior Services (DHSS), as well as other partners including Water System Administrators and Local Public Health Agencies.

DNR regulates Public Water Systems defined as a system that provides water through 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. These systems include publicly owned supplies, as well as privately owned supplies whose use meets the above definition.

The majority of schools and child-care centers are connected to public water supplies. These public water supplies are required to determine if the water they serve to their customers is corrosive to leaded materials, via the Lead and Copper Rule (10 CFR 60-15.010 -- 10 CFR 60-15.090) protocol. Public water supplies utilizing groundwater, because of the high alkalinity and calcium carbonate content in Missouri aquifers, are naturally non-corrosive. At the same time, a large portion of customers on public water supplies are served by systems whose source is surface water. At present, we do not have any surface water supplies in the state that are exceeding the action level for lead or copper.

There are eight daycare centers and 10 public or private schools in Missouri with their own water supplies, which, based on their use, DNR considers a Public Water System. As a result, they must test for lead and copper under the Lead and Copper Rule. None of these have a lead or copper problem. Two schools were determined to have source water lead (naturally occurring), but the schools have installed treatment systems to remove the lead.

In addition to the requirement of systems meeting the definition of Public Water System, the local public health department or DHSS will, upon request, test private water supplies not regulated by DNR for lead contamination.

DHSS is assured, through the above systems, that the drinking water supplied to schools or licensed child-care facilities is tested, reported and problems quickly remediated so that Missouri children frequenting these facilities are not at risk for lead poisoning.

Sincerely,

Richard C. Dunn, Director
Missouri Department of Health and Senior Services

RCD:SAC:ST:pli

cc: Bryant McNally
Scott Clardy
Ken Duzan, DNR

STATE OF MISSOURI Bob Holden, Governor • Stephen M. Mahfood, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.state.mo.us

APR 21 2004

Mr. Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Grumbles:

Thank you for your letter dated March 18, 2004, requesting information on state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities.

The Missouri Department of Health performed testing of water fountains in schools in the early to mid 1990's under the Lead Contamination Control Act. Many water fountains manufactured by Halsey-Taylor were replaced during that time because they had lead lined tanks.

The majority of schools and daycare centers today are connected to public water supplies using both ground and surface water sources. In addition, there are several daycare centers and schools in Missouri with privately owned wells.

Since 1992, the department's Drinking Water Branch has tested, and continues to test more than 1,600 public water supply systems for lead and copper – 96 of which are schools and day centers with their own water supply. These systems are required to be tested under the Lead and Copper Rule, 10 CSR 60-15.010 through 10 CSR 60-15.09. Of the 96 schools and day care centers served by their own water supply, none is presently exceeding lead or copper action levels. Most groundwater in the state is naturally non-corrosive to leaded materials and surface water supplies have installed effective corrosion control programs.

The department feels confident that, through the efforts described above, children are adequately protected from lead exposure through drinking water sources. Should you wish further information about Missouri drinking water sources or the testing that is performed on these sources, please contact Mr. Darrell Osterhoudt with the department's Public Drinking Water Branch at (573) 751-5331, or at P.O. Box 176, Jefferson City, MO 65102. Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Stephen Mahfood
Director

SM:psj

c: DNR, Public Drinking Water Branch

Montana Department of
ENVIRONMENTAL QUALITY
Judy Martz, Governor
P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • Website: www.deq.state.mt.us

April 21, 2004

Benjamin H. Grumbles, Acting Asst. Administrator
United States Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

Dear Mr. Grumbles:

The State of Montana continues to take a serious approach to protecting all its citizens from contamination of drinking water sources. An integral part of our effort includes administration of the Lead and Copper Rule (LCR).

The Montana Department of Environmental Quality (MDEQ) has actively maintained primacy over this rule since 1993. Through MDEQ compliance efforts, we have identified and corrected lead and copper exceedances in many public water supplies, both large and small. The LCR requires periodic sampling of all community and non-transient, non-community water systems. Many rural schools and daycare facilities in Montana have their own public water supplies and are directly regulated under the LCR. Schools supplied by larger water systems have a more limited degree of coverage, depending on the selection of sample sites by the owner of the public water utility.

Part of MDEQ's responsibility for enforcing the Safe Drinking Water Act requires regular compliance inspections of all public drinking water systems. Qualified inspectors visit every community and non-transient, non-community water supply on a three-year schedule. Transient water systems are inspected every five years, although they are not subject to the LCR. During the inspections, compliance with each drinking water rule is checked and recommendations are made. If operational problems are found, a technical assistance visit may be scheduled to help the public water supply owner correct any deficiencies. For lead and copper problems, inspections can reveal causes for problems already discovered through self-monitoring.

The lead and copper program has provided assistance in a number of different ways to any public water system having trouble with excessive lead or copper. Public education materials and information have been provided free of charge in the past. Additionally, public notice language conforming to Federal Register requirements is made available on an individual basis. MDEQ engineers or contractors provide expert technical assistance through the Public Water and Subdivisions Bureau's Field Services Section to correct compliance and operational problems.

State personnel, in cooperation with professional societies and training organizations active in the state, provide a variety of technical assistance programs and training courses. These courses are tailored to provide timely and effective educational opportunities for operators and owners of public water supplies. Regular training in both classroom and conference settings promotes sharing of skills and knowledge and improves operations, management and compliance of all the participating public systems. Course subjects are rotated and updated at frequent intervals to maintain interest and a high degree of participation.

There is no voluntary monitoring program currently in place at the State level for drinking water testing, but some cities and counties have made an effort to check blood lead levels in school children in areas where high soil or air-borne lead is known to occur. Federal Superfund program funding has helped make this possible. Results of this program have helped target areas for soil remediation or encapsulation.

County and local governments have also provided lead education and assistance, especially in connection with Superfund sites involving ore processing. Lewis and Clark County and Silver Bow County have performed blood testing of children by request, at no cost to the requester. Recent budget cuts have reduced the effectiveness of these local efforts, but some local assistance is still available.

If you have further questions regarding lead in drinking water, please contact Sam Martinez at (406) 444-5313. For other information on lead poison prevention efforts, please contact Terry Krantz with the Montana Department of Health and Human Services at (406) 444-4735.

Sincerely,

Tom Livers

for Jan P. Sensibaugh
Director

c: John Wardell, Montana EPA
Steve Welch, Administrator, Permitting and Compliance Division
Jon Dilliard, Chief, Public Water and Subdivisions Bureau
Sam Martinez, Public Water and Subdivisions Bureau

THE NAVAJO NATION
ENVIRONMENTAL PROTECTION AGENCY

Post Office Box 339, Window Rock, AZ 86515
Telephone (928) 871-7755
Fax (928) 871-7818

Joe Shirley, Jr.
President

Frank Dayish, Jr.
Vice President

April 30, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
United States Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Grumbles:

The Navajo Nation Environmental Protection Agency (NNEPA) is responding to your inquiry of activities the Navajo Nation is taking to reduce lead exposure in children with regard to drinking water. You requested for what program(s) the states, or tribes in our case, are implementing for schools and day care facilities. You also requested for a description of the program and results of the program's effectiveness. If states/tribes are not implementing a program, then what steps states are being taken to reduce exposure in schools.

U. S. EPA, Region 9 implemented the Lead Contamination Control Act and conducted sampling and reporting as required by LCCA during the early 1990's. The Navajo Nation continues to address these issues by providing technical assistance and by implementing the Lead and Copper regulatory requirements in its Navajo Nation Primary Drinking Water Regulations. There are several schools that own and operate a public water system and they are required to comply with Lead and Copper regulations. The NNEPA does not have a program that requires sampling in schools unless the school owns/operates a public water system.

The Indian Health Service (IHS), a federal entity on the Navajo Nation, conducts inspections of schools and other facilities. IHS requires school facilities to sample their drinking water in accordance to the LCCA. IHS inspects 195 headstart schools, 159 public schools, 76 Senior Citizens Centers, 45 day care facilities, and 7 preschools. The majority of these facilities purchase water from a purveyor and do not own/operate a public water system.

EPA also requested for information on "how you see EPA working collaboratively to further state's efforts to implement this voluntary program." EPA-Region 9 funds our program to conduct compliance requirements for lead/copper. These funds are based on existing public water systems, land base and population. The lead/copper concern for children is worthy but more funds are necessary to conduct broader and effective assessments. The LCCA needs to be revisited in terms of the becoming a regulatory requirement. This is a health concern and requiring schools and child care facilities to sample will be justifiable.

In 1977, under a cooperative assistance grant with the U.S.EPA, the NNEPA completed a survey of Navajo Nation child-care facilities and the Bureau of Indian Affairs schools to identify target facilities constructed prior to 1978 to determine the extent of Lead-based paint hazards. Based upon the age of the facility, the survey reported that 100 facilities were considered as "target child-occupied facilities". Public Schools were not included in the survey.

If there are any questions, please contact me at (928) 871-7701.

Sincerely,

S. Deb Misra, Director
Surface and Ground Water Protection Department
Navajo Nation Environmental Protection Agency

xc: PWSSP files

HEALTH AND HUMAN SERVICES SYSTEM
DEPARTMENT OF SERVICES • DEPARTMENT OF REGULATION AND LICENSURE
DEPARTMENT OF FINANCE AND SUPPORT

STATE OF NEBRASKA
MIKE JOHANNS, GOVERNOR

April 6, 2004

Benjamin H. Grumbles
Acting Assistant Administrator
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Re: Your request for information regarding lead monitoring of drinking water in schools

Dear Mr. Grumbles;

You recently requested information about state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities. Currently, we have no such program in Nebraska which specifically targets schools and day care facilities.

We did conduct such a program throughout the state of Nebraska in 1989 through 1991. The resulting data from that program are shown below. This program included outreach and education on the recently finalized Lead Ban, and extensive sampling of water from drinking fountains in schools and day care facilities. Drinking fountains found to contain lead were replaced with lead-free fixtures.

I hope this information is helpful.

	Schools	Preschools & Daycare cntrs.
Number in Nebraska	1790	695
Number of sampling for lead	1242	136
Number reporting lead levels over 20 ppb	55	2
Number reporting no water coolers	62	356

Sincerely,

Richard P. Nelson, Director
Department of Health and Human Services
Regulation and Licensure

Copy: Ken Deason, EPA Region VII