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ABSTRACT

This testimony provides an overview of health and environmental issues in U.S. schools and describes efforts by the Environmental Protection Agency (EPA), in concert with other federal agencies, to help schools address environmental issues. These include the Clear Skies Initiative, Indoor Air Quality Tools for Schools, High Performance Schools, promotion of integrated pest management, SunWise School Program, Healthy School Environments Web portal, and President's Task Force on Environmental Health Risks and Safety Risks to Children. (EV)

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**TESTIMONY OF
E. RAMONA TROVATO
DEPUTY ASSISTANT ADMINISTRATOR
OFFICE OF ENVIRONMENTAL INFORMATION
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE**

October 1, 2002

Mr. Chairman and Members of the Committee, I am Ramona Trovato, Deputy Assistant Administrator for EPA's Office of Environmental Information (OEI) and former Director of EPA's Office of Children's Health Protection (OCHP). I am pleased to be here on behalf of Administrator Whitman to discuss EPA's efforts to ensure that our schools are safe and healthy places for our children to learn. Administrator Whitman is a strong advocate for children and has been committed to improving and promoting EPA's programs to address environmental hazards in schools from the day she arrived. I am particularly happy to be here today because today marks the first day of Children's Health Month.

Protecting our children's health is a priority of this Administration and of EPA. Children are our most precious assets, and they can be more vulnerable to many environmental contaminants than adults. Children's bodies are still developing, and they may be exposed to more environmental contaminants than adults both because they eat, drink, and breathe more per pound of body weight, and because their behaviors like putting things in their mouths and playing on and close to the floor may bring them in greater contact with contaminants than typical adult behaviors. Throughout the month of October, a collaborative effort of 17 Federal departments, agencies, and White House Offices will celebrate Children's Health Month by making a special effort to raise awareness of the importance of protecting our children from environmental health and safety risks and by publicizing tips throughout the month for parents and other care providers to follow to keep our children healthy and safe. I encourage you to visit a special inter-agency web site (www.childrenshealth.gov) and help to publicize the practical

steps that people can take during this month and throughout the year to protect kids.

Every time I hear the statistics 15 million people in America suffer from asthma, one-third of whom are children under the age of 18 I am reminded of what a gift it is to breathe freely. Asthma is the leading chronic illness in children and the cause of 14 million missed school days each year. Allergens, including those from mold, cockroaches, dust mites, and animal dander, are all commonly found in indoor environments, including schools, and are known to trigger asthma attacks. Outdoor air pollution from pollutants such as particulate matter and ozone also induce asthma episodes.

Hundreds of thousands of children living in the United States still have blood lead levels high enough to impair their ability to think, concentrate, and learn. Lead poisoning also lowers IQ and increases behavioral problems. Although lead paint hazards in older homes are the biggest concern because of exposures to very young children, lead paint is still found in many older schools, and lead can be found in the drinking water of both old and new schools.

Children in our nation's schools may also be exposed to many other contaminants, including chemicals in cleaning products and art supplies, materials and furnishings used in school buildings, fumes from idling school buses, pesticides, radon and potentially even to mishandled sources of mercury and asbestos. And the list goes on.

Unfortunately, in far too many cases, because of severe past budget shortfalls, our schools are old and inadequately maintained, leading to a host of environmental problems that can have dramatic impacts on children, staff, learning and the fiscal bottom line. Both the General Accounting Office and the National Center for Education Statistics of the Department of Education have documented the poor physical condition of many of our older school facilities.

More than 53 million elementary and secondary students attend approximately 112,000 public and private schools in the United States. Along with approximately 3 million teachers

and staff, this represents about 20% of the U.S. population. The average child spends about 1,300 hours in a school building each year; teachers and other employees spend even longer periods.

According to the National Center for Education Statistics report, The Condition of America's Public School Facilities: 2000, about one-quarter of schools report that they need extensive repair or replacement of one or more buildings. Approximately 11 million students attend these schools. About 40% of schools report at least one "unsatisfactory environmental condition" such as poor ventilation, heating or lighting problems, or poor physical security. According to a 1996 study by the General Accounting Office, America's Schools Report Differing Conditions, these unsatisfactory environmental conditions are most often reported in urban schools, schools with high minority student enrollment, and schools with a high percentage of low income students. In some instances, low income and racial/ethnic minorities have increased exposure to environmental hazards and suffer disproportionately from environmental exposures. For example, the Department of Health and Human Services has estimated that African American children are three times more likely than white children to be hospitalized for asthma and asthma-related conditions; these children are four to six times more likely to die from asthma. These disparities are often at least partially attributable to differences in health care. Minority children also have significantly higher rates of elevated blood lead levels.

To date, school facility conditions have not been widely perceived as playing a critical role in the education process, largely due to the fact that research into the complex relationship between aspects of the physical environment, including environmental factors, and the well-being, health, productivity, and academic performance of students is only now emerging. In fact, the Lawrence Berkeley National Laboratory has recently conducted a review of the scientific literature in this area at EPA's request, and EPA is preparing a summary of the existing science that may associate indoor air quality factors in schools and other buildings with health, productivity, and performance of children. EPA is also supporting research in this area. Our

Science to Achieve Results (STAR) extramural research grant program already supports a limited amount of research on school environments. In 1997, the program provided funding to the University of Minnesota for a school-based study of complex environmental exposures in children at the University of Minnesota. This study used outdoor, in-home, in-school, personal, and human tissue monitoring to quantify exposures among children in two low-income, racially diverse schools in Minneapolis. The Agency continues to explore research related to children's health and the school environment.

Despite the emerging nature of research into the relationship between environmental factors and learning, if a child suffers an asthma attack in class or is not in school because of asthma; if the school is closed because of an environmental health or safety episode; or if the ventilation system is providing little or no fresh air, that child may not be learning up to his or her full potential.

Many schools are being temporarily evacuated or permanently closed due to environmental problems, making the difficult task of educators even more challenging. Moisture problems in schools are known to contribute to both mold and pest problems that may directly affect allergic or sensitive individuals and which can lead to increased application of pesticides. In one case, an elementary school in Fairfield, Connecticut was permanently closed after efforts to fix persistent mold and moisture problems over a period of several years were unsuccessful. The school closure will cost the local school district an estimated \$21 million to replace the school in addition to the costs to demolish the existing structure. The chief of allergy and immunology at the nearby medical center who treated many of the students and teachers over the years estimated that the building impacted the health of up to 40% of students and staff.

Funding for school construction, renovation and repair, raised largely through state and local bond issues, has increased significantly over the past several years, suggesting that the general trend for school improvements is favorable. Nevertheless many schools continue to provide less-than-ideal conditions to facilitate learning, and many may pose unnecessary risks to

the health of children, staff and visitors.

The public becomes aware of new environmental challenges for schools on a regular basis. Siting of schools on or near contaminated sites, exposures of children to outdoor sources such as diesel bus exhaust, the increasing reliance on portable or relocatable classrooms, and the rapidly growing issue of mold contamination all suggest the need for the Federal Government to provide appropriate guidance and technical assistance to states and communities to address environmental health issues in schools. One excellent resource is the National Clearinghouse for Educational Facilities, funded by the U.S. Department of Education.

Within EPA, we have been working very hard for the past several years to help schools address environmental issues. While there is no known cure for asthma, asthma attacks can be prevented by reducing exposure to environmental triggers and by ensuring that all children receive appropriate medical care. EPA is a committed Federal partner in the battle against asthma. Because we believe that one asthma attack is too many, EPA is working to reduce asthma triggers in both outdoor and indoor air.

In February, the President announced the Clear Skies Initiative, which will dramatically cut air pollution by nitrogen oxides, sulfur dioxide, and mercury by 70 percent, using a mandatory, market-based approach. Clear Skies will help to prevent asthma attacks in children. Clear Skies will also help to prevent thousands of premature deaths in the U.S. population.

But Clear Skies is just one part of our effort to make America's air cleaner. We need to make sure that the buses that take our children to school aren't causing them to miss school. President Bush recently approved an EPA rule to reduce pollution from diesel buses and trucks and to require cleaner diesel fuel that will reduce the harmful pollutants from diesel engines by more than 90 percent over today's engines.

EPA has also been leading the charge to help schools address indoor air quality (IAQ)

problems through its widely acclaimed *Indoor Air Quality Tools for Schools* program. *IAQ Tools for Schools* provides an effective framework as well as practical tools to help schools prevent and solve all kinds of environmental problems affecting indoor air quality in schools. More than 10,000 schools are using the program, and major school districts around the country including New York City Schools, Dallas, Brevard County, Philadelphia and LA Unified School District are committed to using the IAQ Tools for Schools as part of their health and safety programs.

We have dozens of anecdotal examples of schools and school districts for which the *IAQ Tools for Schools* program has provided demonstrable benefits, including reducing asthma related nurse visits and missed school days. We recognize, however, that we need better tools to document and measure the effectiveness of the *IAQ Tools for Schools* program. One initial effort is a survey we conducted this past summer that will help us better quantify the reductions in IAQ-related complaints, in absenteeism, and in costs which many schools are reporting as they implement the program.

EPA continues to develop new IAQ tools for schools. The Agency has released specific guidance to help schools identify and fix mold and moisture problems and is working closely with other Federal agencies particularly CDC to help ensure that schools, the public and others receive the most accurate and scientifically sound information on mold related health effects and remediation techniques.

By the end of the year, EPA will also release new web-based guidance devoted to school design, construction and renovation issues titled *Indoor Air Quality Design Tools for Schools*. This guidance for new and renovated schools will complement EPA's *IAQ Tools for Schools* program, which aims to help *existing* schools prevent and solve indoor air quality problems. The new *IAQ Design Tools for Schools* guidance will encourage schools to make indoor air quality goals part of the school planning and design process. It also discusses factors to consider in the siting of school facilities, stresses the importance of building commissioning, and provides

guidance on a host of other issues related to the indoor environment. The guidance will draw from EPA expertise as well as from some excellent resources that have emerged from State and private sector initiatives such as the California Collaborative for High Performance Schools and the US Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating System, among many others. The draft *IAQ Design Tools for Schools* guidance was widely available this summer for public review, and we are now integrating comments from a broad spectrum of interests.

I know that this Committee is particularly interested in the issue of school siting. However, as you know, selection of sites on which to build new schools is largely a local decision and a local issue. Many factors related to the availability and cost of land, community values, and a host of other factors come into play. Unfortunately, in a number of cases and for a variety of reasons, schools are sometimes being built on or close to existing sources of air, water, and/or soil contamination. While the Federal Government does not play a direct role in these decisions, we can help communities make wise decisions by providing better information of potential environmental risks and ways to reduce those risks. For example, the draft *IAQ Design Tools for Schools* guidance recommends early involvement in the siting process by the community, a thorough Phase I environmental site assessment using ASTM guidelines before the site is acquired, and a more detailed site assessment and, if needed, clean-up plan, before deciding to build. There are also a number of tools available to assist communities, including EPA's Enviro Facts Data Warehouse (<http://www.epa.gov/enviro/>), which provides a wealth of resources to help the public access environmental information about their community.

The *IAQ Design Tools for Schools* guidance also strongly encourages school districts to embrace the concept of designing and building High Performance Schools. High Performance Schools are simply schools in which a wide range of issues associated with site planning, energy use, indoor air quality, day-lighting, acoustics and other building systems are considered as a whole building *integrated* design that can save energy, natural resources and money. These concepts are being demonstrated as cost-effective in a number of State, local and private sector

initiatives around the country. Energy efficient design can result in reduced construction costs as well as reduced operating costs. Even in cases where construction costs are higher, energy savings can pay for additional up-front costs very quickly, sometimes in less than a year. And this doesn't include the potential benefits of improved health, productivity and performance.

Another of EPA's priorities is protecting children from unnecessary exposure to pesticides that are used in and around schools to control pests. EPA is encouraging school officials to adopt Integrated Pest Management (IPM) practices to reduce children's exposure to pesticides. EPA is helping schools understand and implement IPM through the distribution of printed publications, awarding grants to start IPM programs, offering workshops and courses, and providing guidance and assistance through the Tools for Schools Program, as well as partnerships with Universities and national associations. EPA has funded two technical resource centers to promote IPM in schools and day care centers, by providing tools, training and technical support to start IPM programs. The Centers also provide support to State efforts and foster sharing of IPM resources nationwide.

EPA has also recently published a brochure on Protecting Children in Schools from Pests and Pesticides. Over 100,000 copies have already been distributed to schools around the country. The brochure is also available on EPA's website at www.epa.gov/pesticides/ipm.

EPA has a wealth of other information and programs to assist schools. The *SunWise School Program* is an environmental and health education program that aims to teach children and their caregivers how to protect themselves from overexposure to the sun's harmful ultraviolet (UV) radiation. SunWise partner schools sponsor classroom, school, and community activities that raise children's awareness of stratospheric ozone depletion, UV radiation, and simple sun safety practices, that can ultimately lead to sustained sun-safe behaviors. *WasteWise* is a free, voluntary EPA program through which organizations eliminate costly municipal solid waste, benefiting their bottom line and the environment. EPA's *Water Alliances for Voluntary Efficiency* (WAVE) program is a voluntary partnership with institutions such as schools and

commercial businesses to prevent pollution and to reduce the demand for and to promote the efficient use of water and energy resources. The *Buy Clean* pilot program is an EPA initiative to partner with schools and others to promote the purchase of products and services for a healthy indoor environment for schools. EPA's *EnergyStar* for Schools program is helping schools conserve energy through the use of benchmarking and other tools. Our EnergyStar partnership with the Department of Energy has been a tremendous success. EPA has also recently created a Green Buildings Web Portal to help the public find green building resources throughout EPA.

EPA is very aware of the resource and other constraints under which many schools and school districts labor, and we recognize the importance of providing not just more and better guidance, but better coordinated and integrated programs that will make the job of addressing environmental health issues easier for schools, or at the very least, more efficient. Our goal is to make our environmental programs directly support schools in achieving their primary mission of educating children.

To achieve this, EPA programs emphasize partnerships with those who have the direct responsibility for educating our children and all of the constituencies that are part of the educational process. This includes relationships with individual schools, school districts, and organizations representing school administrators, school nurses, teachers, facility planners and managers, architects, engineers, parents, and even kids. We partner with other Federal agencies, with states, tribes, and with communities to assist schools in any way we can.

We are also working within EPA to better coordinate and integrate existing programs. Toward that end I am pleased to be able to report to you today that just a week ago we inaugurated a new *Healthy School Environments Web Portal* (www.epa.gov/schools) to provide one-stop access to EPA resources for schools, as well as to help school administrators, facility managers, design engineers, architects, health professionals, parents, teachers, staff and students find helpful resources from other Federal agencies, States, communities and non-governmental organizations.

We are looking for additional opportunities to streamline EPA programs for schools and make them more accessible and more helpful. We recently received a number of recommendations regarding EPA's school programs from the EPA's Children's Health Protection Advisory Committee. These recommendations are consistent with our efforts to improve the guidance available to schools and better coordinate EPA programs.

We believe it is critically important for Federal agencies to work together and in close collaboration to coordinate and leverage existing Federal programs and resources impacting children's health in schools. The *President's Task Force on Environmental Health Risks and Safety Risks to Children*, co-chaired by Administrator Whitman and Secretary Thompson, has proven to be an effective forum to facilitate increased coordination and collaboration within the Federal community on a variety of issues, including asthma, lead, unintentional injuries, childhood cancer, and now schools. The Task Force has identified school environmental health as a priority and established an interagency Schools Workgroup to identify opportunities for better coordinating Federal efforts in this area. The Schools Workgroup is co-chaired by EPA, the Department of Education and the Department of Health and Human Services, and includes representatives from other Federal agencies involved in school health issues, such as the Department of Energy, the Department of Agriculture, and the Department of Labor, among others.

The President's Task Force Schools Workgroup is currently developing an inventory of federal programs related to school environmental health. The primary goal of the inventory is to inform the development of a strategic plan that will provide recommendations for increasing the effectiveness of Federal school environmental health programs. The inventory will also be incorporated into a publicly accessible electronic database of school environmental health programs and activities.

The creation of the workgroup has already substantially improved coordination and cooperation within the Federal community in addressing school environmental health issues.

For example, EPA and CDC have offered their assistance and are providing information to the Department of Education to help them scope the study of Unhealthy School Buildings mandated by the No Child Left Behind Act. EPA is also becoming an active participant in the National Coordinating Committee on School Health, which is sponsored by DHHS, the Department of Education and the Department of Agriculture and is comprised of many of the non-governmental organizations interested in school health issues.

In conclusion, EPA is committed to working within the Federal community, with states and tribes, local governments and communities, as well as with public and private non-governmental organizations to promote children's health in our nation's schools.

Thank you for the opportunity to testify today. I look forward to working with you to make our schools the healthiest possible environments in which to learn as well as to work.

I will be glad to respond to any questions you may have.



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