



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
CHILDREN'S HEALTH PROTECTION

Pamela Shubat, Ph.D., Chair,
Children's Health Protection Advisory Committee
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Environmental Health Division
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Dear Dr. Shubat:

Thank you for your letter of November 17, 2011. Administrator Lisa Jackson has asked me to respond on her behalf.

Thank you and the members of the Indoor Environment Workgroup of the Children's Health Protection Advisory Committee (CHPAC) for your recommendations to the Agency on steps to enhance healthy indoor environments. I am pleased to update you on progress and activities across the Agency related to many of the CHPAC recommendations.

Intra-Agency Recommendation:

Standards

U.S. Environmental Protection Agency (EPA) appreciates the CHPAC recommendations regarding the importance of standards for indoor environments. EPA's Office of Air and Radiation (OAR) recently released the Healthy Indoor Environment Protocols for Home Energy Upgrades. These indoor environment protocols for existing homes, combined with EPA's Indoor airPlus label for new home construction, represent the first ever comprehensive federal specifications for indoor environmental quality in homes. The Protocols and Indoor airPlus are designed to complement energy efficiency programs, including Energy Star and the Department of Energy's (DOE) Weatherization Assistance program. OAR is also working with DOE to develop indoor air quality specifications for multi-family housing, modeled on the development of the Protocols for single family homes. We are developing a comparable set of protocols designed to help energy managers in schools who are making the principal investment in school facility improvements integrate effective indoor environmental quality assessment and risk prevention actions during energy efficiency retrofits. We believe these protocols and specifications will also help to influence other building labeling programs including the U.S. Green Building Council Leadership in Energy and Environmental Design program and the

National Association of Homebuilders National Green Building Program, as you recommended in your letter.

In addition, standards of practice that address the measurement and control of radon in homes and schools are critical for ensuring protections from this health threat in buildings across the United States. EPA is participating in the development of privately-developed, consensus based standards through collaboration with states and the American National Standards Institute/American Association of Radon Scientists & Technologists Consortium on National Radon Standards. The next set of efforts is targeted at filling the gaps in the current set of radon standards through multifamily mitigation and radon in schools measurement and mitigation.

Education and Outreach

Education and outreach continues to be a core element of EPA's work to improve indoor air quality. In addition to efforts from EPA headquarters to coordinate with national partners, EPA regional staff in indoor air quality, children's health, IPM, community-based and other programs are working with state and local stakeholders to provide information on important steps to create healthy indoor environments. These programs are driving direct outreach and technical assistance and some financial assistance to states and communities. For example, the Office of Children's Health Protection is currently funding grants to community-based organizations across the United States to build local capacity for addressing children's environmental health priorities in underserved communities, including in indoor environments. In addition, a Request for Applications (RFA) was recently posted to competitively award IAQ funding to state-level and local entities to promote healthy indoor environments. EPA also maintains a greener products web portal to help consumers, institutional purchasers, manufacturers, and others make informed choices about greener products, such as safer cleaning and other products with the EPA's Design for the Environment label (<http://www.epa.gov/greenerproducts/>).

Guidance targeted to healthy school and early learning environments developed by OAR, OCHP, the Office of Chemical Safety and Pollution Prevention and others, such as IAQ Tools for Schools, School IPM, the new School Sitting Guidelines, the draft State School Environmental Health Program guidelines, and a new Child Care Resources web portal (www.epa.gov/childcare) are examples of successful programs and new guidance for science-based actions to improve environmental health for children. EPA also recently posted an RFA for states and tribes to support the development and enhancement of state and tribal healthy schools programs, focused on the promotion of healthy indoor school environments. In addition, EPA is currently establishing a national schools integrated pest management (IPM) center of excellence in our Regional office in Dallas to support the implementation of IPM programs in schools across the US.

Research

The Agency also continues its commitment to support a robust research agenda which will address many of CHPAC's recommendations by generating new data and information to inform decisions that protect and promote children's health in home, school and community settings. The Office of Research and Development (ORD) funds the Children's Environmental Health and Disease Prevention Research Centers Program ("Children's Centers") in collaboration with the National Institute of Environmental Health Sciences. This program is building the evidence base

for the adverse impact of childhood exposures, exploring linkages between those exposures and health outcomes such as asthma and neuro-developmental disorders, and evaluating the effectiveness of intervention strategies to protect children's health. Details of the research projects of the 14 current Children's Centers that conduct research in both urban and rural settings can be found at (<http://www.epa.gov/ncer/childrenscenters/>). Community engagement is an integral part of this work. The Children's Centers research program applies community-based participatory research approaches to understand and prevent children's exposure to environmental hazards including allergens and air pollutants as well as chemicals in products with which children come into contact. In addition, most of the Centers have a Community Outreach and Translation Core that works in collaboration with the Center investigators and a community advisory board to translate scientific findings into information for the public, policymakers and clinical professionals that can be used to protect children's health. EPA has committed to sustaining the Children's Centers program with a new solicitation in 2013. Furthermore, ORD is developing a Science to Achieve Results (STAR) solicitation for extramural research on healthy and sustainable school and child care environments with an emphasis on how building features, ventilation, and operations can be optimized to promote healthy development and maximize performance.

EPA also conducts in-house research directly relevant to the indoor environment and children's health, including research on diverse stressors such as roadway exposures near homes of asthmatic children, vapor intrusion risks from nearby industrial sites, indoor air pollution from products of wood burning stoves (including implications for Tribal communities), occurrence of mold in damp environments, and PCBs and other toxics in buildings and both legacy and new building materials. EPA will soon complete a number of research studies focused on enhancing understanding of opportunities to mitigate exposures to PCBs in fluorescent lighting ballasts, caulk and other building materials in schools and other buildings. EPA research is also contributing to the improvement of exposure models for indoor air quality. A major research effort is focused on identifying opportunities to increase the safety of chemicals used in children's products and environments through improved and more efficient screening and testing strategies (see recent letter to CHPAC from Lek Kadeli, Acting Assistant Administrator for ORD).

ORD will continue to work with OCHP to prioritize research objectives consistent with CHPAC's recommendations. In particular, ORD's Sustainable and Healthy Communities Program is initiating research designed to provide communities with tools, information and data to help make better development and re-development decisions, including those which apply specifically to the housing and building sector. The overall goal of this program is to use systems approaches to help communities reduce risks from complex exposures, such as those occurring in indoor environments, while promoting health in economically viable and equitable ways. Pilot studies in several communities, including a Tribal community, are developing and evaluating these tools and approaches. For example, the Community-Focused Exposure and Risk Screening Tool (and a Tribal-specific variant) brings together data and information on such place-based indoor environmental stressors as radon, lead in house dust, and arsenic in drinking water in a user-friendly, web-based format. ORD would welcome the opportunity to brief CHPAC on these tools in more detail.

Two of the ORD funded Children's Centers are focusing on research of risk associated with take-home exposures to pesticides derived from occupational exposures in agricultural communities (Yakima Valley, WA and Salinas Valley, CA). Recent publications have demonstrated the effectiveness of educational prevention and intervention strategies, and we expect these approaches to translate to other scenarios.

In addition, ORD's Tribal Research program includes a STAR solicitation (planned with input from the Office of Radiation and Indoor Air and OCHP) focused on climate change and the indoor environment in vulnerable groups with specific reference to Tribal cultural values and practices. A new RFA is also being developed to explore more broadly the impact of climate change on indoor air quality. These efforts are contingent upon future budgets.

ORD's Chemical Safety for Sustainability Research Program is also contributing important information to promote healthy indoor environments through research to improve methods for analyzing and assessing chemicals used in products (e.g. furniture, building materials), with the aim of enhancing safety throughout their life cycle, from production through use and disposal/recycling/reuse. Research on materials management and sustainable technologies in the Sustainable and Healthy Communities research program includes emphasis on materials re-use to prevent harmful exposures to children and others.

Safe Management of Chemicals

EPA believes that legislative reform of the Toxic Substances Control Act (TSCA) is an important goal in ensuring the safety of chemicals used in products by consumers. In 2009, the Administration released a set of principles for TSCA reform which provide a vision for moving forward. These principles state that we should require that all chemicals be reviewed against a safety standard based on sound science that reflects risk based criteria protective of human health and the environment, including the health of children and other vulnerable populations. The principles also emphasize that legislative reform should give EPA significantly greater authority to require any data necessary to assess the safety of chemicals and to quickly take action on chemicals which cause harm. The substantial increase in information available on toxic chemicals would vastly improve the understanding of chemical risks and greatly enable government and the public to make better informed decisions about the chemicals that are in the products we use daily, many of which are widely used in indoor environments. These key elements represent a significant change in the approach the United States has historically taken in regulating chemicals and would substantially update and modernize TSCA. EPA will continue to work with stakeholders on this important issue.

By January 1, 2013, EPA plans to finalize regulations implementing multiple actions mandated under the recently enacted TSCA Title VI (Formaldehyde Standards for Composite Wood Act) which establishes national emission standards for formaldehyde in new composite wood products. These actions will ensure compliance with the formaldehyde emission standards and will address the following topics, among others: labeling, chain of custody requirements, sell-through provisions, ultra low-emitting formaldehyde resins, no-added formaldehyde-based resins, finished goods, third-party testing and certification, auditing and reporting of third-party certifiers, recordkeeping, enforcement, laminated products, and other provisions aside from the

emission limits. These actions will make a significant contribution to reducing concentrations of formaldehyde in indoor environments across the United States.

Inter-Agency Recommendations:

Finally, the Agency will continue to work through inter-agency partnerships to coordinate and leverage activities to promote healthy indoor environments. The President's Task Force on Environmental Health Risks and Safety Risks to Children, co-chaired by EPA and the Department of Housing and Urban Development (HUD), recently released the Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities. Implementation of this plan will serve to leverage and better coordinate existing federal activities on asthma to enhance delivery of environmental protections and health care services to the minority and lower income children most impacted by asthma. EPA also recently led development of the Federal Radon Action Plan to reduce radon exposure in the housing the federal government owns or influences. Moreover, EPA is working with HUD, the Centers for Disease Control and Prevention and other federal partners to develop an Inter-Agency Healthy Homes Strategy for action, with the Department of Education (DoEd) and the Council on Environmental Quality, to grow the DoEd Green Ribbon Schools Award program. EPA will work closely with federal partners in these and other interagency efforts to enhance policy and program protections for protection of children's health.

The Office of Children's Health Protection will work across EPA and with government and non-government partners to ensure that the recommendations you have provided are carefully considered as we move forward in our efforts to support improvements in indoor air quality to protect children's health.

Thank you again for your thoughtful recommendations.

Sincerely,



Peter Grevatt, Ph.D.

Director

Office of Children's Health Protection

cc: Michal Flynn, OAR
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