

U.S. Environmental Protection Agency
CHILDREN'S HEALTH PROTECTION ADVISORY COMMITTEE
Mount Vernon Place, 900 Massachusetts Avenue, Washington, DC
Call-In Number: 866-299-3188 Code: 751-067-2219#
July 13-14, 2011

Purpose and Meeting Objectives

- Learn about current lead regulations underway at EPA
- Learn about EPA research plans and how they will affect research on children's health
- Update on CHPAC work group activity and responses to previous advice
- Learn about the recent NAS climate change and indoor air report and discuss implications for children's health
- Discuss and plan next steps on lead regulations, children's health research and other issues

Wednesday, July 13, 2011

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| 8:30-9:00 | COFFEE |
| 9:00-9:15 | Welcome, Introductions, and Review of Meeting Agenda – Pam Shubat, Chair |
| | Lead Regulations and CHPAC Opportunities |
| 9:15-9:30 | Overview and Background – Brenda Foos, Director, Regulatory Support and Science Policy Division, Office of Children's Health Protection, USEPA [see Attachment 1] |
| 9:30-10:15 | Lead Integrated Science Assessment – Ellen Kirrane, National Center for Environmental Assessment, Office of Research and Development, USEPA [see Attachment 1] |
| 10:15 – 10:30 | Questions and Discussion on Lead Integrated Science Assessment |
| 10:30-10:50 | BREAK |
| 10:50 - 11:20 | Lead NAAQS rulemaking process presented by OAR/OAQPS [see Attachment 1] |
| 11:20 - 11:35 | Questions and Discussion on Lead NAAQS |
| 11:35 – 12:20 | Residential Lead Dust Hazard Standards (TSCA Sec 403) -- Tala Henry, Acting Director, National Program Chemicals Division, Office of Pollution Prevention & Toxics, Office of Chemical Safety & Pollution Prevention, USEPA [see Attachment 1] |
| 12:35 – 12:55 | Questions and Discussion on Residential Lead Dust Standards |
| 12:55-2:15 | LUNCH |
| 2:15 – 2:45 | National Primary Drinking Water Regulations for Lead and Copper: Regulatory Revisions presented by Jeff Kempic, OW/OGWDW [see Attachment 1] |
| 2:45 – 3:00 | Questions and Discussion on Lead and Copper Rule |
| 3:00 – 3:15 | BREAK |
| 3:15 –3:35 | Lead assessment targets at superfund sites presented by James Konz, OSWER |

- 3:35 – 3:45 Questions and Discuss on Lead Assessment Targets
- 3:45—3:55 Discussion of Next Steps on Lead Regulations – Pam Shubat
- 3: 55 – 4:25 **CHPAC Work Group Reports**
Indoor Environments Group – Janice Dhonau and Tyra Bryant-Stephens
Prenatal Group – Nancy Clark and Amy Kyle
- 4:25 –5:00 **Highlights of Office of Children’s Health Protection Activities** – Peter Grevatt
- 5:00-5:30 **Public Comment**

Thursday, July 14, 2011

- 8:00-8:30 COFFEE
- 8:30-9:10 **Presentation and Discussion on the newly released NAS/IoM Report [Climate Change, the Indoor Environment, and Health](#)** – Linda McCauley, Dean, Nell Hodgson Woodruff School of Nursing, Emory University [see Attachment 2]
- 9:10 – 9:30 Questions and Discussion of NAS report
Office of Research and Development: New Research Planning Process [see Attachment 3]
- 9:30 – 10:00 Review of Children’s Environmental Health Research and Overview of the new research planning process-- Sally Darney, National Program Director for Human Health, Office of Research and Development, US EPA
- 10:00 – 10:20 BREAK
- 10:20 – 10:50 [Chemical Safety for Sustainability](#) – Elaine Francis, Office of Research and Development, US EPA
- 10:50 –11:20 [Sustainable and Healthy Communities](#) – Sally Darney
- 11:20 – 11:45 Questions, Discussion and Next Steps on ORD plans
- 11:45 – 12:00 Wrap Up – Pam Shubat
- 12:00 ADJOURN

Mark Your Calendars!

Next CHPAC Plenary Meeting is November 16 and 17, 2011
Marriott Wardman Park
2660 Woodley Road NW
Washington, DC 20008

Please Note: This will be the last CHPAC meeting with the current membership slate. The new membership group will be announced in November or December.

Attachments to July 2011 Agenda

Background and Information on Lead Regulations and CHPAC Opportunities

Attachment 1: EPA's Upcoming Lead Regulations

Despite the fact that children's blood lead levels have declined in the past century, ~250,000 children in America have elevated levels of lead in their blood (CDC 2009). Children's health effects from lead exposure include significant developmental and neurological impairment. Lead poisoning has been linked to mental retardation, poor academic performance and juvenile delinquency.

Children are still being exposed to hazardous levels of lead from a variety of sources. EPA is currently working to further reduce lead exposure in children from these various pathways. Several regulatory actions are at a critical phase of Agency's process, where targeted CHPAC input is particularly valuable to make sure that children's lead poisoning is being appropriately addressed.

National Ambient Air Quality Standard for Lead

The EPA is conducting a review of the air quality criteria and the national ambient air quality standards (NAAQS) for lead. On October 15, 2008, EPA substantially strengthened the primary (health-based) standard for lead to be EPA has revised the level of the primary (health-based) standard from 1.5 $\mu\text{g}/\text{m}^3$ to 0.15 $\mu\text{g}/\text{m}^3$, measured as total suspended particles (TSP). This is 10 times tighter than the previous standards and will improve health protection for at-risk groups, especially children. More information on lead NAAQS can be found here: http://www.epa.gov/ttn/naqs/standards/pb/s_pb_index.html.

Integrated Review Plan: On April 12, 2011, EPA released a draft of the Integrated Review Plan (IRP) for the NAAQS for Lead (<http://edocket.access.gpo.gov/2011/pdf/2011-8706.pdf>). The deadline for public comments was April 28, 2011. The Clean Air Science Advisory Committee (CASAC) held a meeting on May 5, 2011 to provide advice on the draft IRP (<http://edocket.access.gpo.gov/2011/pdf/2011-9211.pdf>). CASAC's comments can be seen here: [http://yosemite.epa.gov/sab/sabproduct.nsf/59BC7753C5F4CB968525789B00726887/\\$File/EPA-CASAC-11-007-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/59BC7753C5F4CB968525789B00726887/$File/EPA-CASAC-11-007-unsigned.pdf).

Integrated Science Assessment: On May 6, 2011, EPA released the first external review draft of the Integrated Science Assessment (ISA) for Lead - Federal Register / Vol. 76, No. 88 (<http://edocket.access.gpo.gov/2011/pdf/2011-11140.pdf>). The deadline for public comments is July 5, 2011. The draft ISA can be found here: <http://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=226323>. Expected Final ISA: July 2012

Risk and Exposure Assessment Planning Document: EPA plans to release the first external review draft of the Risk and Exposure Assessment Planning Document (REA) in support of the Lead NAAQS. The draft REA planning document can be found here: http://www.epa.gov/ttnnaqs/standards/pb/s_pb_2010_pd.html.

The Clean Air Science Advisory Committee (CASAC) Meeting will be held on July 20-21, 2011 to discuss the ISA and REA planning document (<http://www.gpo.gov/fdsys/pkg/FR-2011-06-21/pdf/2011-15414.pdf>).

Residential Lead Dust Hazard Standards (TSCA Sec 403)

EPA is amending the 2001 Dust Hazard Standards regulation to further reduce dangerous levels of lead in dust. Currently, lead is considered a hazard when equal to or exceeding 40 micrograms of lead in dust per square foot on floors, 250 micrograms of lead in dust per square foot on interior window sills, and 400 parts per million (ppm) of lead in bare soil in children's play areas or 1200 ppm average for bare soil in the rest of the yard. EPA is reviewing existing data regarding lead dust for its update. Identifying lead hazards through these standards will allow inspectors and risk assessors to assist property owners in deciding how to address problems which may include lead paint abatement, covering or removing soil or professional cleaning of lead dust.

Historical Information on Dust Hazard Standards: <http://epa.gov/lead/pubs/leadhaz.htm>.
Expected Proposal for Dust Hazard Standards: June 2012

Lead Wheel Weights; Regulatory Investigation

Under the Toxics Substances Control Act (TSCA), EPA is investigating potential lead hazards associated with the manufacturing, processing, and distribution of lead wheel weights, used for balancing cars. Approximately 65,000 tons of lead wheel weights were in use in the United States and approximately 2,000 tons of these weights were lost from vehicles into the environment. Voluntary actions as a result of EPA's National Lead-Free Wheel Weight Initiative have reduced the number of lead wheel weights in new automobiles <http://www.epa.gov/osw/hazard/wastemin/nlffwwi.htm>, but they continue to be predominant product in the tire replacement market.

Information on Wheel Weights: <http://yosemite.epa.gov/oepi/rulegate.nsf/byRIN/2070-AJ64>.
Expected Proposal for Lead Wheel Weights: June 2012

National Primary Drinking Water Regulations for Lead and Copper: Regulatory Revisions

Children can be exposed to lead and copper via drinking water, primarily through service lines and household plumbing. Several revisions are being considered for the lead and copper rule based on new health effects data. These considerations are longer-term in nature as they require additional data collection, research, analysis, and stakeholder involvement to support decisions. Regulatory changes being addressed include changes to flushing guidance and sample collection; lead service line replacement; potential changes to the sample site selection criteria for lead and copper sites; guidance on new corrosion control treatments; tap sampling issues including pre-stagnation flushing, aerator removal, and maximum stagnation times; and consecutive water systems.

Information on Lead/Copper Rule: <http://yosemite.epa.gov/oepi/rulegate.nsf/byRIN/2040-AF15>.
Expected Proposal for Regulatory Revisions: 2013/2014

Clearance Revisions for Lead Renovation, Repair, and Painting

In 2009, EPA reached a settlement to propose revisions to the 2008 Lead Renovation, Repair, and Painting Program (RRP) rule to determine whether additional requirements were needed to ensure that lead-based paint hazards generated by renovation work are being adequately cleaned after renovation work is finished and before the work areas are re-occupied. Specifically, EPA is determining whether additional clearance and dust wipe testing should be included in the RRP rule.

Information on Clearance Revisions to RRP: <http://yosemite.epa.gov/oepi/rulegate.nsf/byRIN/2070-AJ57>.
Publishing of Final Rule: July 2011

Air Toxics Residual Risk and Technology Rules for Primary and Secondary Lead Smelters

EPA is in the process of evaluating the air toxics risks remaining after the application of Maximum Achievable Control Technology (MACT) standards, known as residual risks, for a number of source categories, including primary and secondary lead smelters.

On January 31, 2011, published a Notice of Proposed Rulemaking (NPRM) for Primary Lead Smelting. A final rule is expected by October 31, 2011.

On May 19, 2011, EPA published a Notice of Proposed Rulemaking (NPRM) for Secondary Lead Smelting in the Federal Register (76 FR 29032). The comment period ends on July 5, 2011. A final rule is expected by December 11, 2011.

Information on all residual risk rules: <http://www.epa.gov/ttn/atw/rrisk/rtrpg.html>

Attachment 2: Climate Change, the Indoor Environment, and Health

Amid the considerable research on how climate change may affect public health, one subject has received relatively little attention—the impact of climate change on indoor environments. As the world’s climate changes, buildings that were designed to operate under the “old” climatic conditions may not function well under the “new”—affecting the health of those who live, work, study, or play in them. Against this backdrop, the U.S. Environmental Protection Agency asked the IOM to summarize the current state of scientific understanding of the effects of climate change on indoor air and public health, and to offer priorities for action. The IOM concludes that climate change influences indoor environmental quality, warranting attention and action. This conclusion is based on three key findings:

1. Poor indoor environmental quality is creating health problems today and impairs the ability of occupants to work and learn.
2. Climate change may worsen existing indoor environmental problems and introduce new problems.
3. There are opportunities to improve public health while mitigating or adapting to alterations in indoor environmental quality induced by climate change.

In this report, the IOM outlines the major climate-induced indoor environmental problems and recommends ways to reduce the health effects these problems cause. The IOM also recommends a number of specific actions for the EPA to take in cooperation with other government organizations and the private sector.

Attachment 3: Office of Research and Development Research Planning

New Research Planning Process

EPA's 1996 National Agenda to Protect Children's Health from Environmental Threats called for several actions including: ensuring that all EPA standards are protective of children; and expanding research on risks to children. In response, ORD developed a Strategy for Research on Environmental Risks to Children in 2000 which has guided the agency's CEH research the past decade. A summary of EPA's ongoing CEH research can be found at the Life Stages Research website.

EPA is now in the process of revamping its planning efforts to develop research action plans in six priority areas which will all have a focus on sustainability. The plans, currently under development, will undergo OMB review and scientific peer review this summer, and will be implemented at the beginning of FY-2012 in October 2011.

Research planning areas include:

- Air, Climate, and Energy
- Chemical Safety for Sustainability
- Safe and Sustainable Water Resources
- Sustainable and Healthy Communities
- Homeland Security
- Human Health Risk Assessment

Much of the resources currently devoted to CEH research are currently slated to shift to Sustainable and Healthy Communities with a smaller amount supporting Chemical Safety for Sustainability, and some additional funding for asthma research in Air, Climate and Energy.

With ORD working to complete plans for the future of research at EPA this summer, now is a critical time for the CHPAC to weigh-in on the importance of continuing to fund critically important CEH research that cuts across the six planning areas, as well as research that complements other federally-funded CEH research.

A continuing and robust CEH research program at EPA likely encompasses both continuing successful programs such as the Children's Environmental Health Research Centers jointly funded with NIEHS, and developing new avenues of research including future toxicity testing and risk assessment methods that address early life development and target windows of susceptibility, along with a focus on understanding the underlying environmental component of pervasive childhood diseases.

Summary of ORD's Past and Current CEH Research Priorities

I. Strategy for Research on Environmental Risks to Children (2000)

Research Priorities:

Development of data to reduce uncertainties in risk assessment

Mode-of-action research (High)

Epidemiology and clinical studies (High)

Exposure field studies (High)

Activity pattern and exposure factor studies (High)

Development of risk assessment methods and models

Methods and models for assessing dose-response relationships in children (High)

Methods and models for using exposure data in risk assessments for children (High)

Experimental methods development

Methods for hazard identification and studying mode of action (High)

Methods for measuring exposure and effects in children and to aid in extrapolations between animals and children (Medium)

Risk management and risk communication

Multimedia control technologies (Low)

Reduction of exposure buildup of contaminants indoors (High)

Communication of risk (High)

Cross-cutting research

Variation in human susceptibility (Medium)

Cumulative risk (Medium)

II. ORD's Current Life Stages Research

Research Goals:

- Elucidate early biological indicators of effect, mode of action, and potential biomarkers that vary as a function of life stage
- Identify methods and develop models that can be used to assess life stage exposures and susceptibility
- Develop efficient study designs (e.g., age groups for exposure assessments) to study effects of and exposure to chemicals as a function of life stage
- Identify potential susceptible subpopulations based on life-stage-dependent exposures, activity patterns, and health status that could significantly change current risk assessment practices and policies
- Develop integrative exposure-dose-response models for quantitatively characterizing susceptibility to environmental pollutants in susceptible subpopulations and minimizing reliance on default assumptions in assessing risk
- Develop and verify information to support an Exposure Factors Handbook for the aging (similar to that already developed for children) that can be used by EPA, States, and local agencies, as well as community associations, for evaluating the potential risks of environmental pollutants
- Provide guidance to EPA concerning the appropriate use of safety factors to protect potentially sensitive subpopulations.
- Develop both qualitative and quantitative exposure assessment methods that can be applied to longitudinal methods
- Develop broadly applicable risk management solutions that will allow schools to carry out practical action plans to improve indoor air quality and protect children's health at a reasonable cost