



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 2012

MEMORANDUM

SUBJECT: Addressing Children's Health through Reviews Conducted Pursuant to the National Environmental Policy Act and Section 309 of the Clean Air Act

FROM: Susan E. Bromm *Susan E. Bromm*
Director, Office of Federal Activities

Peter Grevatt *Peter Grevatt*
Director, Office of Children's Health Protection

TO: Regional 309 Environmental Review and
Regional Children's Environmental Health Coordinators

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (April 21, 1997), directs Federal agencies, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children and to ensure that policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks.

Protecting children's health is central to our work at EPA. EPA uses a variety of approaches to protect children from environmental health hazards, including the development and implementation of regulations, community-based programs, research, and outreach.

The successful implementation of the National Environmental Policy Act (NEPA) program can make a significant contribution to advancing the Agency's children's health mission. The Office of Federal Activities (OFA) and Office of Children's Health Protection (OCHP) are working together to integrate consideration of children's health into EPA's NEPA and Section 309 reviews. We have identified the following opportunities to complement your existing work to ensure the Executive Order is carried out in our reviews of other agencies' environmental impact statements (EISs) and other NEPA documents:

- We encourage Regional 309 Environmental Review staff to carefully consider potential children's health impacts when conducting EIS reviews. The Regional Children's Health Coordinators have expertise in identifying potential children's health issues and we recommend that the Regional 309 Environmental Review staff invite the Regional Children's Environmental Health Coordinators to assist in appropriate EIS reviews (a list

of Regional 309 Environmental Review and Children's Environmental Health Coordinators is attached).

- We have attached for your use and consideration, a template for EPA scoping comments for children's health issues and a listing of sample federal projects that might warrant a children's health review.
- There may be opportunities to evaluate environmental health risks to children in Federal actions that are not subject to the preparation of EISs. As resources permit, for appropriate Federal actions, we encourage the Regional 309 Environmental Review staff and the Regional Children's Environmental Health Coordinators to review NEPA environmental assessments in cases where there may be a disproportionate effect on children.
- OCHP has developed a short children's health on line training for EPA staff that is available on EPA's E-Learning website (<https://epa.skillport.com/skillportfe/login.action>). OCHP has also posted a compilation of scientific data and methods to help improve the scientific understanding of children's environmental health concerns at: http://yosemite.epa.gov/ochp/ochpweb.nsf/content/whatwe_scientif.htm. This site contains information on risk assessment, toxicity and exposure assessment, and other information to help better understand potential environmental impacts on children's health.

EPA co-chairs the President's Task Force on Environmental Health and Safety Risks to Children and we will be exploring the use of this forum to enhance outreach opportunities to coordinate with appropriate Federal agencies on children's environmental health issues, including EISs. We would like your ideas to assist in these efforts. The HQ points of contact for these efforts are Cliff Rader, OFA (202-564-7159) and Theodore Coopwood, OCHP (202-564-2197).

We look forward to working with you to ensure that children's health considerations are an integral part of our NEPA/Section 309 reviews. Please call either contact listed above if you have any questions, further thoughts or ideas.

Attachment: List of Regional 309 Environmental Review Coordinators and Regional Children's Environmental Health Coordinators
Potential NEPA/309 Scoping Comments for Children's Health Projects that May Affect Children's Health

cc: Regional NEPA/309 Division Directors

**Regional 309 Environmental Review
Coordinators**

R1 Tim Timmermann (617) 918-1025
R2 Grace Musumeci (212) 637-3738
R3 Barbara Rudnick (215) 814-3322
R4 Heinz Mueller (404) 562-9611
R5 Ken Westlake (312) 886-2910
R6 Rhonda Smith (214) 665-8006
R7 Joe Cothorn (913) 551-7148
R8 Suzanne Bohan (303) 312-6925
R9 Kathleen Goforth (415) 972-3521
R10 Teena Reichgott (206) 553-1601

**Regional Children's Environmental Health
Coordinators**

Kathleen Nagle (617) 918-1985
Maureen O'Neill (212) 637-5025
Prentiss Ward (215) 814-2813
Wayne Garfinkel (404) 562-8982
Maryann Suero (312) 886-9077
Paula Selzer (214) 665-6663
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Alicia Aalto (303) 312-6967
Kathleen Stewart (415) 972-4119
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Potential NEPA/309 Scoping Comments for Children's Health

NOTE: The following language should be modified to be relevant and appropriate for individual reviews of proposed projects.

Children's Health and Safety

Executive Order 13045 on Children's Health and Safety directs each Federal agency, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that its policies, programs, activities, and standards address these risks. The Executive Order recognizes that some physiological and behavioral traits of children render them more susceptible and vulnerable than adults to environmental health and safety risks. Children may have a higher exposure level to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Children also exhibit behaviors such as spending extensive amounts of time in contact with the ground and frequently putting their hands and objects in their mouths that can also lead to much higher exposure levels to environmental contaminants. In addition, a child's neurological, immunological, digestive, and other bodily systems are also potentially more susceptible to exposure related health effects. It has been well established that lower levels of exposure can have a negative toxicological effect in children as compared to adults, and childhood exposures to contaminants can have long-term negative health effects. Examples include life-long neurological deficits resulting from exposure to lead, mercury and other metals, and the increased susceptibility to particulate matter and other asthma triggers in the environment.

It is well documented that children are more susceptible to many environmental factors that are commonly encountered in EIS reviews, including exposure to mobile source air pollution, particulate matter from construction or diesel emissions and lead and other heavy metals present in construction and demolition debris or mining waste. We recommend that an analysis of potential impacts to children be included in a draft EIS if disproportionate impacts on children caused by the proposed action are reasonably foreseeable. Childhood exposures at each lifestage, including those experienced via pregnant and nursing women, are relevant and should be considered when addressing health and safety risks for children.

We recommend that the draft EIS assess children's potential exposures and susceptibilities to the pollutants of concern, including the following:

- **Identification of the pollutants and sources of concern:** Consider whether the pollutants and sources of concern pose a particular hazard to children's health (for example, lead or other heavy metals, or air pollution from near roadway exposures)
- **Exposure Assessment:** Describe the relevant demographics of affected neighborhoods, populations, and/or communities and focus exposure assessments on children who are likely to be present at schools, recreation areas, childcare centers, parks, and residential areas in close proximity to the proposed project, and other areas of apparent frequent and/or prolonged exposure.

- **Baseline health conditions:** Consider obtaining and discussing relevant, publicly available health data/records for the populations, neighborhoods, and/or communities of concern.

[Add those among the following that are relevant and/or add other appropriate concerns relative to the proposed project.]

- **Impacts from Air Pollutant Emissions:** Consider exposure and impacts to children from mobile source air pollutants, including children's proximity to transportation corridors, transportation hubs and ports, and project construction emissions. Combine these with other area sources/baseline air quality, such as, existing or new power generation or energy extraction facilities, mining operations, industrial facilities, dry cleaners, etc.
- **Respiratory Impacts/Asthma:** Within the discussion on air pollution impacts, consider data on existing asthma rates and asthma severity among children and the general community living, working, playing, and attending school and daycare near the project site. To the extent feasible, identify potential for increased health risks of the project with respect to asthma rates and severity in children near the project site and discuss associated potential costs.
- **Noise Impacts:** Consider impacts from noise on health and learning, especially near homes, schools, and daycare centers.
- **Impacts Regarding Obesity Factors:** Consider potential impacts that could influence childhood obesity factors, such as impacts on opportunities for children to exercise outdoors, including opportunities to walk or bicycle to school, and potential impacts on the accessibility of neighborhood parks, green spaces, and recreation areas.
- **Other Diet/Ingestion Factors:** Consider potential impacts to the food and water supplies of traditional life-ways of tribal children.
- **Air Quality Impacts from Non-Mobile Source Emissions:** Consider exposure and adverse impacts to children due to increased emissions from power plants, nuclear reactors, incinerators, or mining operations.
- **Impacts from Mobile Source Air Pollutant Emissions:** Consider exposure and impacts to children from mobile source air pollutants from project construction and operations, including significant increases in traffic predicted as a result of the project. Children are believed to be especially vulnerable due to higher relative doses of air pollution, smaller diameter airways, and more active time spent outdoors and closer to ground-level sources of vehicle exhaust. Identify children's proximity to project emission sources, including transportation corridors, transportation hubs, ports, and construction sites.
- **Impacts from Other Chemical or Physical Exposures:** Consider potential impacts to children from other site activities, such as pesticide application, demolition, etc.

Projects that May Affect Children's Health

Air quality (Children breathe more air in proportion to their body size)

- Projects involving new mobile source air emissions near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, child care facilities, parks or other recreation areas, e.g., transportation projects, port/goods movement projects, projects that introduce significant new truck traffic on roads, and projects that could result in significant traffic impacts.
- Projects involving new major stationary sources near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, parks or other recreation areas or child care facilities, e.g., power plants or other major combustion sources.
- Projects that have a long construction period near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, or near recreational areas such as sports parks and play grounds, or child care facilities, including roadway dust control using substances other than water, such as waste oils or other potential contaminants.
- Projects with an unusually long production lifespan that could include emissions during that period, such as oil and gas development where the production period of a well can last over thirty years.
- Projects to construct new residences, schools, or child care facilities, recognizing the importance of using methods that maintain good indoor air quality, avoiding contaminated sites.
- Projects to expand or build airports or increase air traffic near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, or child care facilities. Concerns include, but are not necessarily limited to MSAT emissions, lead from engine aircraft using leaded aviation fuel, or projects that could put children closer to existing airports.

Water/Sediment quality (Children drink/ingest more in proportion to their body size)

- Projects that have the potential to contaminate drinking/ground water or expose additional children to existing contaminants in drinking/ground water.
- Projects that could impact water supply to communities, including significant groundwater drawdown affecting nearby residential wells.
- Projects with an unusually long production lifespan that could include potential impacts to water quality during that period, such as oil and gas development where the production period of a well can last over thirty years.
- Projects that could expose children to contaminated sites, e.g., Superfund sites, state clean-up sites.

- Projects that propose to place material on areas where children recreate, including beach nourishment projects, and park construction projects.

Floodplains (Children are more vulnerable in disasters)

- Projects to construct new residences, schools, or child care facilities in a floodplain.
- Projects that could reduce floodplain storage increasing flood risk to nearby residences, schools, or child care facilities.

Noise (Noise affects children's learning)

- Projects that could introduce significant new noise to residents, schools, or child care facilities during operational phase, e.g., airports, military bases/training, and possibly wind turbines.

Traffic safety (children play outdoors, walk/bike to school)

- Projects that could introduce significant new truck traffic on roads near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, or child care facilities.
- Projects that could result in substantial traffic impacts.
- Projects that could impact a child's ability to safely travel (e.g., walking, biking) to school or neighborhood parks.

Lead and other heavy metals

- Projects that could bring children into contact with soils that could be contaminated with lead from paint dust/chips or other sources.
- Projects that involve demolition of structures with lead-based paint that would be redeveloped for uses that could involve children, or are located near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, or child care facilities.
- Projects that introduce new leaded gasoline emission sources, e.g., small aircraft.
- Projects that may release lead or other heavy metals near areas where children are likely to be present and outdoors such as residential neighborhoods, schools, or child care facilities.

Pesticides (Children are at greater risk due to developing bodies and increased exposures)

- Projects that involve aerial application of pesticides near neighborhoods, schools, or child care facilities, or could bring new residences, schools, child care facilities, or parks within areas susceptible to pesticide drift.
- Projects that could potentially bring residents or students into contact with contaminants.

Other toxic chemicals or agents (Children are often more susceptible and more highly exposed to pollutants than adults)

- Projects that involve demolition of older buildings near neighborhoods, schools, or child care facilities that may contain hazardous materials, e.g., asbestos, PCBs.
Projects that involve excavating/disturbing soils contaminated with asbestos, PCBs, or other hazardous substances near neighborhoods, schools, or child care facilities.

Radiation (Children may be at greater risk)

- Projects that could bring radiation sources near residences or bring residences into contact with radiation, e.g., coal power plants, high-power transmission lines, cell-phone towers.