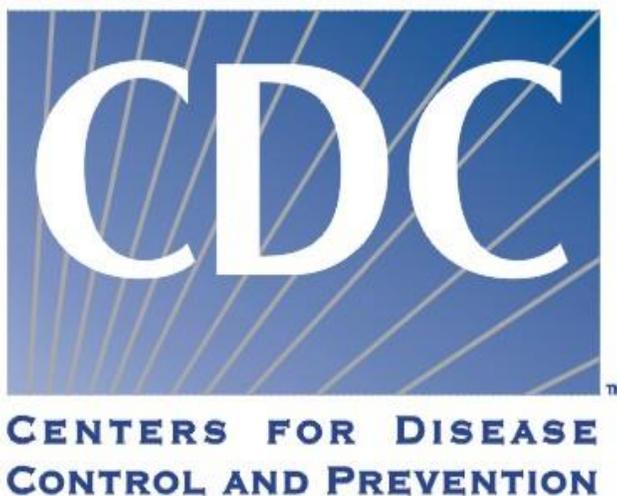


**DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
National Center for Environmental Health/
Agency for Toxic Substances and Disease Registry**



**Board of Scientific Counselors Meeting
November 17-18, 2005
Atlanta, Georgia**

Record of the Proceedings

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ATTACHMENT 1

List of Participants

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Dr. Janvier Gasana
Dr. Lois Gold
Dr. Cynthia Harris
Dr. Nancy Kim
Dr. Harold Koenig
Dr. Ronald Laessig
Dr. Roger McClellan
Dr. Jerome Nriagu
Dr. Geary Olsen
Dr. Daniel Wartenberg
Dr. Gayle Windham
Dr. Raymond Yang

Ex-Officio Members

Dr. James Stephens (NIOSH)
Ms. Brenda Weiss (NIH/NIEHS)
Dr. Harold Zenick (EPA)

Designated Federal Official

Dr. Thomas Sinks

CDC Representatives

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(NCEH/ATSDR Director)
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Mr. Clive Brown
Dr. Sharunda Buchanan
Ms. Leslie Campbell
Dr. William Cibulas
Dr. Scott Deitchman
Ms. Diane Dennis-Stephens
Dr. Christopher DeRosa
Dr. Obaid Faroon
Mr. Bruce Fowler
Ms. Laura Frazier
Ms. Kim Gehle
Mr. Rick Gelting

Ms. Olivia Harris
Dr. Michael Hatcher
Dr. Janet Heitgerd
Ms. Arnetra Herbert
Mr. Mike Herring
Mr. Jerry Hershovitz
Dr. Heraline Hicks
Mr. Dan Holcomb
Mr. Jim Holler
Mr. Mitch Holmes
Mr. Monty Howie
Ms. Betty Jones
Mr. Sam Keith
Ms. Megan Latshaw
Mr. Shirley Little
Mr. Hugh Mainzer
Ms. Sandra Malcom
Ms. Susan McClure
Ms. Joy McVey
Ms. Jeanne Moorman
Mr. Ed Murray
Dr. John Osterloh
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Ms. Marilyn Radke
Dr. Stephen Redd
Dr. Kenneth Rose
Ms. DeAnn Ryberg
Mr. Eric Sampson
Mr. John Savisky
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Mr. Edward Shanley
Ms. Cassandra Smith
Dr. Yee-Wan Stevens
Ms. Jana Telfer
Ms. Carolyn Tylenda
Mr. Stephen Vindigni
Mr. Clement Welsh
Dr. Sharon Williams-Fleetwood
Dr. David Williamson

Members of the Public

Shirley Baker (CTS Member)

Mr. Talmage Holmes (Battelle Memorial Institute)

EXECUTIVE SUMMARY

The Department of Health and Human Services and the Centers for Disease Control and Prevention (CDC) National Center for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR) convened a meeting of the Board of Scientific Counselors (BSC) on November 17-18, 2005 in Atlanta, Georgia.

The new NCEH/ATSDR Director described the history, science, goals and environmental health challenges that will drive NCEH/ATSDR's future priorities and direction. CDC established 24 goals that included 21 health protection goals and 3 preparedness goals. Each CIO within CDC has been assigned several goals. NCEH/ATSDR is assigned seven health protection goals as well as the three preparedness goals: Healthy Communities, Healthy Travel and Recreation, Healthy Homes, Healthy Schools, Healthy Workplaces, Healthy Health Care Institutions, Infants and Children's Health, and the preparedness goals of Infectious Disease, Chemical Preparedness and Radiation Preparedness. Dr. Frumkin prioritized Healthy Places and Preparedness goals, as well as emphasizing solid environmental health data. Most notably, CDC's new goals management process and 2006-2015 Health Protection Research Guide (HPRG) will have a significant impact on NCEH/ATSDR's environmental health portfolio in the future. The BSC provided NCEH/ATSDR with several suggestions to make the HPRG more user-friendly and relevant to partners and the public.

CDC led the national public health and medical response to Hurricanes Katrina and Rita by. Staff were deployed and various infectious disease and environmental health issues were addressed. Up-to-date and accurate materials were distributed to diverse audiences. An initial assessment of environmental health needs and habitability issues following Hurricane Katrina was developed and released in collaboration with the U.S. Environmental Protection Agency. CDC and its federal partners will also be extensively involved with state and local agencies during the hurricane recovery phase.

CDC will convene the 7th National Environmental Public Health (EPH) Conference on December 4-6, 2006 in Atlanta, Georgia. The event will focus on the EPH workforce, leadership, practice, service delivery and science.

The update by the Program Peer Review Subcommittee (PPRS) covered several areas. The PPRS Chair described the current structure and future direction of the program peer review process. Findings and recommendations from the peer review of the Environmental Health Services Branch (EHSB) were presented to the BSC. EHSB described actions that will be taken to respond to PPRS's recommendations.

PPRS will conduct peer reviews of the Air Pollution and Respiratory Health Branch in December 2005 and the Division of Toxicology and Environmental Medicine in February 2006. Detailed overviews of these programs were presented, including past accomplishments, current activities, milestones and future directions. The BSC

identified specific expertise that will be needed in the DTEM peer review and suggested some candidates.

The Division of Laboratory Sciences (DLS) presented its new laboratory methods for detecting botulism toxins. DLS is conducting this activity in response to a request by the CDC Director to develop new methods to measure botulism toxins. The existing mouse bioassay used in this effort was created >80 years ago and is extremely labor- and resource-intensive. DLS took the BSC on a tour of its facilities.

The Community and Tribal Subcommittee (CTS) and the Health Department Subcommittee (HDS) reported on current activities and priority areas. The CTS is focusing on health disparities and environmental justice, while HDS will continue to focus on EPH workforce development issues over the next six months. The BSC provided the CTS and HDS with several suggestions to refine activities in the respective focus areas.

The Delisting Workgroup presented its draft criteria and overall plan to remove chemicals from CDC's *National Report on Human Exposure to Environmental Chemicals*. The BSC's extensive discussion led to topics beyond the workgroup's mission. As a result, issues, concerns and suggestions raised by the BSC during the discussion will be compiled and forwarded to the Workgroup and PPRS in preparation of DLS's upcoming peer review in June 2006.

During, the BSC's open discussion, members noted they were impressed by and pleased with DLS's new facilities and by the future direction of NCEH/ATSDR under its leadership with a new director.

BSC members expressed concern that the extremely short discussion periods following each presentation limited its ability to actively rather than passively contribute to the overall process of strengthening CDC's environmental health portfolio. The BSC members also noted that during the PPRS report, key outcomes of the EHSB peer review were not clearly explained and EHSB's response to the peer review appeared to be "defensive." The PPRS was asked to consider approaches for clear reports of findings of peer reviews and a format for programs to respond to the recommendations.

The consensus recommendation, agenda item and action items raised by the BSC over the course of the meeting were reviewed. The consensus recommendation was properly moved, seconded and unanimously approved by voting members with no abstentions.

Consensus Recommendation

- *PPRS's report of the EHSB peer review is accepted.*

Action Items

- *The Executive Secretary will distribute NCEH/ATSDR's portfolio of health disparities and EJ activities to the BSC.*
- *The Chair will obtain information from NCEH/ATSDR to draft a letter to Congress about the important role of DLS's activities in environmental health. The Chair will circulate the draft letter to BSC for review and ask the members to decide whether one letter should be submitted to Congress as a formal BSC communication or if multiple letters should be sent from individual constituency groups.*
- *The Executive Secretary will facilitate HDS's communications with Dr. Ed Thompson, CDC's Chief of Public Health Practice, and Dr. Steven Thacker, Director of the Office of Workforce and Career Development.*
- *NCEH/ATSDR will provide the HDS with an inventory of its training and capacity-building activities.*

Agenda Item

- *Extensive half- or full-day BSC discussion on NCEH/ATSDR's future goals, direction and new priorities.*

The Chair opened the floor for public comments at all times as noted on the published agenda.

The next two BSC meetings will be convened on May 4-5, 2006 and December 6-7, 2006.

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY**

**BOARD OF SCIENTIFIC COUNSELORS
*November 17-18, 2005
Atlanta, Georgia***

Minutes of the Meeting

The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) National Center for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR) convened a meeting of the Board of Scientific Counselors (BSC). The proceedings were held at CDC's Century Center offices in Atlanta, Georgia on November 17-18, 2005.

Opening Session

Dr. Patricia Nolan, the BSC Chair, called the meeting to order at 8:45 a.m. on November 17, 2005. She welcomed the attendees to the proceedings and opened the floor for introductions. The list of participants is appended to the minutes as Attachment 1.

Dr. Howard Frumkin was recently appointed as the new NCEH/ATSDR Director. He presented certificates signed by the CDC Director to recognize the tenures of two BSC members whose terms have expired: Drs. Cynthia Harris and Jerome Nriagu. The participants applauded the valuable input and tremendous contributions of the outgoing BSC members.

Future Direction of NCEH/ATSDR

Dr. Frumkin described the history, science, goals and environmental health challenges that will drive NCEH/ATSDR's future priorities and direction. NCEH has undergone several transformations since its establishment in 1980, including name changes, an expanded scope and additional functions. NCEH's three original programs for epidemiology, clinical laboratories and state services were broadened to include injury prevention and control, birth defects and developmental disabilities, global activities,

radiation, vessel sanitation, disaster epidemiology, chemical demilitarization, asthma and air pollution.

NCEH's focus areas on injury prevention and control and birth defects and developmental disabilities were transferred to two new CDC national centers in 1992 and 2000, respectively. Laboratory sciences, childhood lead poisoning prevention, disaster response and environmental health capacity building remain as signature NCEH programs. NCEH's most recent transformation was its consolidation with ATSDR in 2003.

ATSDR was formally organized in 1985 as CDC's sister agency after the Superfund law was passed in 1980. ATSDR was established with a Congressional mandate, explicit language and specific responsibilities to oversee, manage and assess the public health function of locating and cleaning toxic exposures or releases at the nation's most hazardous waste sites. ATSDR's signature programs include site-specific activities, toxicologic evaluations and research, health education, emergency response, registries, and hazardous substances emergency events surveillance. NCEH/ATSDR's current budget is \$200-\$250 million and its workforce includes 600-800 staff and contractors.

In addition to the histories and consolidation of NCEH and ATSDR, CDC's new goals management process will also drive the future direction of CDC's environmental health portfolio. This initiative was recently established to manage agency-wide activities and measure progress toward meeting the goals. The six strategic imperatives of the goals management process focus on CDC's health impact, capacity to serve as a customer-centric organization, public health research, leadership for the nation's health system, global health initiatives, and effectiveness and accountability to partners and customers.

The 21 goals of the goals management process are categorized as "healthy people," "healthy places," "preparedness" and "global health." The Coordinating Center for Environmental Health and Injury Prevention (CCEHIP) houses NCEH/ATSDR and has been assigned lead responsibility for six of the 21 goals focusing on healthy communities, adolescents, toxic chemical exposures, radiation exposure, healthy homes, and healthy travel and recreation.

Efforts are underway in CDC to identify and hire goal leaders who will define and articulate agendas for each goal. The ultimate outcomes of the goals management process are for CDC to align the goals with its funding streams and evaluate and measure performance and the allocation of resources based on the goals. CCEHIP recently formed internal discussion groups to identify current and new environmental

health activities that address the goals. The public is encouraged to obtain additional information about the goals management process on CDC's web site.

NCEH/ATSDR's major environmental health challenges for the future include climate change, land use and transportation trends, globalization, population growth, impending petroleum scarcity, persistent health disparities, and the reduced environmental health workforce. As the new NCEH/ATSDR Director, Dr. Frumkin will take several actions to address these challenges and prioritize goals for healthy places, preparedness and solid environmental health data. The precedent and legacy of both NCEH and ATSDR in the environmental health arena will be respected and aligned with CDC goals. Emphasis will be placed on pressing environmental health problems. NCEH and ATSDR programs will continue to be fused to further integrate the agencies' expertise in environmental public health (EPH) practice, science, toxicology and other areas.

NCEH/ATSDR programs will be directed to be more fiscally responsible because budgets will not be expanded in the near future and all CDC centers will incur additional administrative costs due to the agency-wide reorganization. A national constituency and support will be built for environmental health. Training activities will be increased to provide professional education and build environmental health capacity at both domestic and global levels. Environmental justice (EJ) and health disparities will play a critical role in all NCEH/ATSDR programs. Additional resources will be leveraged by strengthening existing partnerships with the U.S. Environmental Protection Agency (EPA) and other agencies and establishing new collaborations with planners, architects, conservation groups and other organizations.

CDC's 2006-2015 Health Protection Research Guide (HPRG) will also significantly impact NCEH/ATSDR's future direction. The HPRG will serve as a comprehensive and long-range vision of national and global public health needs to evaluate and address through research. The HPRG will also serve as the basis for creating a short-term research agenda for CDC and its partners. The primary environmental health components of the HPRG are as follows. The "cross-cutting research" topic focuses on the physical environment and health, including global climate changes and natural and built environments.

The "safe places to live, work and play" topic focuses on environmental risk factors, exposures, health interventions, data and information systems, biomonitoring methods and tools, and lead exposure and health. The "preparedness promotion" topic focuses on vulnerable communities and populations, infrastructure and prevention, detection, diagnosis, communication, and preparation and response of the public health workforce and front-line workers. The "building a healthy world" topic focuses on global health and

vulnerable populations in global settings. The HPRG will be released for a 60-day public comment period in November 2005 and the web-based version of the document will be circulated to the BSC for review and comment.

Dr. Frumkin encouraged the BSC collectively or members individually to contact him at 404/498-0004 or hfrumkin@cdc.gov to discuss NCEH/ATSDR's future goals and direction in more detail.

The BSC made several suggestions for NCEH/ATSDR to consider while further refining and prioritizing its future goals and direction.

- Consider three additional environmental health challenges when establishing long-range priorities: the scarcity of water; the projected decline rather than growth of the human population in the 22nd century; and the integration of environmental health and occupational medicine in the broader healthcare system.
- Hold workshops with non-CDC public health staff to obtain independent and objective input, innovative approaches for the future and creative environmental health strategies.
- Institutionalize preparedness issues as an important component throughout NCEH/ATSDR. Encourage programs to routinely include preparedness strategies while conducting environmental health activities at sites.
- Modify the HPRG to be more user-friendly and relevant to partners and the public. For example, produce and distribute an abbreviated version of the HPRG as a fact sheet or brochure to affected communities. Add an executive summary to the beginning of the HPRG that highlights the key points. Include hyperlinks and page numbers in the tables in the web-based version of the HPRG for readers to rapidly and easily advance to the corresponding sections. Develop solid and effective marketing strategies to ensure federal partners, researchers, emergency responders and other specific audiences provide input on certain sections of the HPRG. Convene a series of conference calls or public meetings with key audiences to advise these groups on providing feedback to NCEH/ATSDR. Include language on the economic impact and cost savings to the public health system the HPRG may generate. Include "diet" as a new HPRG topic and enhance collaborations with the Food and Drug Administration in this effort. Extend the 60-day public comment period of the HPRG to 90 days due to the holiday season.

CDC's Response to Hurricanes Katrina and Rita

Dr. Scott Deitchman is the Associate Director of Terrorism Preparedness and Emergency Response. He described CDC's involvement in the national response to the hurricanes. HHS is the lead federal agency for public health and medical response during a disaster and NCEH/ATSDR supports EPA's responsibility to address hazardous materials during an event. CDC's emergency response activities are fully integrated into the pre-impact and impact phases of a disaster, preparedness and planning, response and recovery.

Specific projects within CDC's emergency response activities include national response and contingency plans, ~\$800 million per year for state preparedness grants, ~\$800 million for the Strategic National Stockpile, the World Trade Center registry, rapid toxicology screening, the Hazardous Substances and Emergency Events Surveillance Program, and geographic information systems. CDC implemented several strategies to address a broad range of infectious disease and environmental health issues while managing the public health and medical response to the hurricanes. Most notably, high levels of mold were found in New Orleans and cases of the human West Nile virus and carbon monoxide poisoning were reported in Alabama, Louisiana and Mississippi after Hurricane Katrina.

As of November 14, 2005, CDC deployed 760 staff for Hurricanes Katrina, Rita and Wilma; allocated \$63 million for medical supplies and equipment; and activated its Emergency Operations Center for 76 days. Of ~860 U.S. Public Health Service officers assigned to CDC, >63% were deployed to support the national hurricane response. CDC posted notices on its web site for the public and distributed materials to public health departments to address the health, safety, medical screening and information needs of several groups, including response and cleanup workers, evacuees, health professionals, volunteers and school personnel. CDC hired a contractor to interview all staff who participated in the hurricane response to identify lessons learned, evaluate performance and make improvements for future events.

In September 2005, CDC and EPA jointly developed and released an initial assessment of environmental health needs and habitability issues following Hurricane Katrina. The report serves as a preliminary evaluation of several areas, including core environmental health issues to address; responsibility for these tasks at federal, state and local levels; progress made to date and outstanding challenges; the necessary time-line and resources to conduct activities; and key milestones and end points to define success.

The report also ranks environmental health issues based on the time and complexity associated with fully restoring services in New Orleans.

Along with EPA, CDC is also partnering with the Federal Emergency Management Agency (FEMA), agencies at state and local levels, and private environmental health organizations in the hurricane response. CDC and its federal partners will be extensively involved with state and local agencies during the recovery phase to repopulate New Orleans, rebuild the city health department, and restore and integrate public health and medical services.

NCEH/ATSDR is serving as the federal environmental health agency in the FEMA Joint Field Office in New Orleans and is also conducting specific environmental health activities to support recovery and restoration efforts. Sediment data from the Murphy Oil spill are being evaluated. Technical assistance is being provided to EPA on monitoring the air, designing a sampling strategy and interpreting results from debris burning. A mold contamination survey is being administered to determine the understanding of health risks, knowledge of protective measures and practices among residents returning to New Orleans. EPA's sediment, air and water sampling data are being interpreted. An environmental health specialist will serve on the CDC team that will be deployed in Louisiana for one to two years to collaborate with the state health department.

Dr. Thomas Sinks is the NCEH/ATSDR Acting Deputy Director and the BSC Executive Secretary. He and Dr. Deitchman noted that key lessons CDC has learned to date from Hurricanes Katrina and Rita are the need to improve data sharing with states, strengthen partnerships with health and medical staff and the private sector at the local level, and develop effective mechanisms to handle volunteers during an event. CDC is currently responding to Congressional and other federal requests to describe its actions during Hurricane Katrina. The performance of CDC and other federal agencies during the national response will be evaluated at both Congressional and federal levels.

The BSC raised the possibility of charging the Health Department Subcommittee (HDS) with identifying approaches for NCEH/ATSDR to enhance relationships with health departments to strengthen capacity to respond to future events.

Overview of CDC's 2006 National EPH Conference

Mr. Jerry Hershovitz is the Associate Director for Program Development. He provided an overview of the 7th National EPH Conference that will be held on December 4-6,

2006 in Atlanta, Georgia. Five thematic tracks and several objectives have been established for the event. New partnerships will be created and existing collaborations will be enhanced and expanded to widely promote NCEH/ATSDR's environmental health leadership and strengthen EPH practice, service delivery and science. Awareness and support of NCEH/ATSDR's role in the EPH field will be broadened. New and emerging leaders will be developed. Workforce development and capacity building will be promoted.

A diverse group of professionals with expertise in environmental health will be invited to make presentations and attend the conference. "Save-the-date" cards will be mailed to ~5,000 persons, but NCEH/ATSDR will also provide the notices to each BSC member in both hard-copy and electronic formats for wider distribution. NCEH/ATSDR is now exploring the possibility of providing continuing education credits to the conference participants based on profession. NCEH/ATSDR welcomes input from the BSC on new topics to include, nationally recognized persons to invite as presenters, and other issues to improve the proposed structure of the conference. Comments can be submitted to Mr. Hershovitz at jmh6@cdc.gov.

The BSC expressed a strong interest in assisting NCEH/ATSDR to make the EPH conference a success. Two key suggestions were made in this effort. "Endocrine disruption" and the "integration of environmental health activities at the community level" should be added to the five thematic tracks where appropriate. Collaborative efforts should be undertaken with state health department officials to host EPH conferences in individual states through tele-conferences to increase the number and diversity of attendees.

The BSC made a commitment to answer three questions and provide its decisions to NCEH/ATSDR before the meeting was adjourned on the following day. First, should CDC's internal conference planning committee regularly communicate with a BSC member, an EPA representative and CDC's other environmental health partners or should these persons actually serve on the planning group as consultants? Second, should the date of the November 2006 BSC meeting be changed to coincide with the EPH conference in December 2006? Third, if so, should the November 2006 BSC meeting be held during the conference?

Update by the Program Peer Review Subcommittee (PPRS)

Report by the PPRS Chair. Dr. Daniel Wartenberg covered the following areas in his update. PPRS is charged with conducting independent and scientific reviews of

NCEH/ATSDR programs and developed a specific process to fulfill its charge. Outside reviewers are identified, site visits are conducted, and a report of findings and recommendations from the peer review is prepared for final approval by the BSC. PPRS uses self-assessment questionnaires that are completed by the programs to obtain input during the peer review process. This approach eliminates the traditional “adversarial” relationship between programs and independent reviewers and engages each program in an ongoing self-evaluation of established goals, current performance and areas to improve in the future.

PPRS redesigned the questionnaires based on feedback from numerous sources and will use the revised tools in the next program peer review. However, PPRS is continuing to partner with the Community and Tribal Subcommittee (CTS) to include health disparities and EJ issues in the questionnaires. PPRS will also make another change in response to Dr. Frumkin’s recent request. The existing peer review process will be modified to focus more on broad functions rather than specific activities of a division or program.

The focus areas of the peer review process include the relevancy of each program and its activities to CDC’s mission, effective management, level of scientific quality, collaborations with partners and other outreach initiatives, effective use of resources, and future directions. PPRS will conduct several peer reviews of NCEH/ATSDR programs over a five-year period and will also formally review and evaluate its peer review process no later than 2007. Key outcomes of the second peer review and overviews of the next two programs scheduled for review are outlined below.

Peer Review of the Environmental Health Services Branch (EHSB). Ms. Becky Norton Dunlop represented the BSC on the EHSB peer review and pointed out that the recommendations of the review team and a summary of EHSB’s budget and full-time employees were distributed to the BSC. She emphasized that the review team was extremely impressed by the knowledge, enthusiasm and commitment of EHSB staff based on presentations and meetings during the site visit. Preliminary findings of the review team are highlighted below.

- Narrow EHSB’s focus from six to three goals to foster leadership for persons, products and communications in environmental health.
- Do not increase EHSB’s funding, but include a specific “EHSB” line item in the NCEH/ATSDR budget to facilitate planning and prioritizing future activities.

- Clearly identify, target and prioritize efforts to more effectively serve and meet the needs of key clients, constituents and strategic partners, particularly state governmental agencies, territories and tribal agencies.
- Convene tele-conferences, increase use of the Internet and apply other interactive technologies to provide opportunities for students, local officials, representatives of academic institutions and other diverse audiences to more easily learn about the environmental health field.
- Prioritize emergency, essential, desirable and other services based on staff, funding and state needs. For example, the Vessel Sanitation Program is self-funded due to the “desire” for this activity.
- Develop and distribute an environmental health education curriculum to academic institutions to increase the number of trained professionals in the environmental health workforce. Provide scholarships to individuals to support this effort.
- Assign EHSB staff to locate solid science and effectively deliver these data to target audiences in most need.

EHSB’s Response to the Peer Review

Dr. Sharunda Buchanan, the EHSB Chief, described actions EHSB will continue and take in the future to respond to PPRS’s review recommendations. To “focus activities,” EHSB will use its established criteria to address issues based on existing skills, scope of the project and current resources in terms of funding and personnel. To “prioritize activities,” emergency response will continue to serve as EHSB’s number one function. EHSB played a critical role in the national response to Hurricane Katrina and will continue to provide oversight and services to state and local health departments and other customers.

To “serve customers,” EHSB collaborated with state, local and private partners to revitalize environmental health services. Six goals were identified in this effort to build capacity, support research, strengthen the workforce and foster leadership. These goals are also consistent with the people, places and preparedness goals in CDC’s new goals management process. To “focus on existing research,” EHSB will continue to undertake this effort to develop guidelines and best practices, but will also conduct new studies. Most notably, EHSB is providing technical oversight and assistance to an original research project on exposures from septic systems.

To “institute a fee-for-services policy,” EHSP will obtain clarification from PPRS. To “establish an evaluation group,” EHSP will solicit feedback from HDS on the best mechanisms to achieve this goal. Overall, EHSHP is extremely interested in interacting

with HDS on a regular basis to respond to PPRS's recommendations and strengthen its programmatic activities.

Overview of the Air Pollution and Respiratory Health Branch (APRHB). Dr. Stephen Redd, the APRHB Chief, announced that PPRS will conduct a peer review of APRHB in December 2005. He highlighted the key components of the program. APRHB was established with four overarching goals. The health burden of asthma will be reduced. The understanding of health effects from exposure to mold will be improved and current information on this issue will be disseminated to the public. The health burden from carbon monoxide will be reduced. The health burden from biomass smoke exposure and other air pollutants will be understood.

APRHB's activities are primarily focused on its asthma goal. Ongoing efforts are made to collect asthma surveillance data, refine scientifically valid asthma control efforts, and improve partnerships to control asthma in schools and the workplace. CDC's National Health Interview Survey data showed that the asthma prevalence in the United States has continued to increase from 1980-2002. CDC data also demonstrated a persistent disparity in the asthma mortality rate between African Americans and whites. Hospital discharge rates for asthma have gradually declined over the past ten years. Women are more likely than men to be hospitalized for asthma and children are more likely than adults to visit emergency rooms for asthma.

National data are available on the prevalence, deaths, hospitalizations, and visits to outpatient clinics and emergency departments for asthma. However, these data are not sufficiently timely and do not contain adequate geographic specificity to plan and evaluate state and local interventions. To address this gap, APRHB is collaborating with states to assess existing mortality, hospitalization and Medicaid data and develop and implement telephone asthma surveys. State health departments obtain asthma hospitalization data from state hospital associations and submit summaries of this information to APRHB based on broad age groups. APRHB uses the summaries to produce statistical comparisons of states.

APRHB identifies, funds and implements science-based asthma interventions that allow grantees to translate research curricula and strategies into actual practice. These efforts have resulted in the publication and funding of several peer-reviewed and science-based asthma interventions. The seven-city "Controlling Asthma in American Cities Project" demonstrated the efficacy of public health approaches in reducing asthma. The five-year initiative was launched in October 2003 for grantees to plan a broad-based and multi-sector asthma intervention. APRHB collaborates with federal partners, state and local public health agencies, healthcare providers and purchasers,

and non-profit and professional organizations to produce asthma curricula, develop and implement statewide asthma control plans, and build capacity in asthma throughout the country. Many of APRHB's projects have a community health worker component as well.

APRHB's activities to focus on mold include responding to public health emergencies resulting in heavy mold exposures; examining case definitions for idiopathic pulmonary hemorrhage; addressing public concerns about mold; and collaborating with other federal agencies to better define the health burden of mold exposure. APRHB's activities to reduce the burden of carbon monoxide poisoning include providing support to state and local health departments in emergency response and national surveillance. APRHB's activities to improve understanding of the health burden from biomass smoke exposure and other pollutants include developing biomarkers and conducting epidemiologic investigations or surveillance for air pollution exposure.

Overview of the Division of Toxicology and Environmental Medicine (DTEM). Dr. Christopher DeRosa, the DTEM Director, announced that PPRS will conduct a peer review of DTEM in February 2006. He highlighted the key components of the program. A publicly and peer reviewed information base was developed to promote optimal decision-making for DTEM activities. Chemical substances found at hazardous waste sites are prioritized in coordination with EPA. Profiles of available data are created on the toxicity, epidemiology and exposure of each substance. An applied research program is conducted based on data needs outlined in toxicological profiles. Emergency response and preparedness activities are conducted with multi-disciplinary teams. Education is provided and information is mapped to enhance DTEM's capacity to translate science into public health practice.

DTEM has developed 163 toxicological profiles; 11 chemical mixture profiles; 181 one-page summaries of toxicological facts in English and Spanish; a rapid reference for healthcare providers; public health statements for the lay audience in English and Spanish; and new sections on hormone-active agents, children's health and genetic polymorphisms to characterize vulnerable populations. The toxicological profiles are independently peer reviewed and released for public comment. DTEM formally addresses all comments and outlines its disposition of the comments in a public docket.

DTEM has developed toxicological profiles for other federal agencies. The tools are cited in journals and have been extremely useful in informing issues in addition to environmental medicine, such as immunization and learning deficits in children. The International Program of Chemical Safety, World Health Organization and other groups routinely use the toxicological profiles as resource documents.

DTEM's Substance-Specific Applied Research Program was mandated by the Superfund law. Of 270 priority needs identified under the program for 60 substances, 86 have been filled. DTEM's voluntary research initiatives were sponsored by industry, addressed 15 research needs, informed the development of health guidance values and generated a cost savings of ~\$10 million. DTEM's projects through a cooperative agreement with the Association of Minority Health Professions have filled 14 priority data needs, enhanced existing capacity in environmental health personnel and research facilities, encouraged students to enter the environmental health field, and published several papers in the literature.

DTEM's Human Health Effects Research Program has supported epidemiologic studies in eight Great Lakes states, published >70 papers, filled 14 priority data needs, and developed a uniform Great Lakes sports fish advisory. DTEM's research on susceptible populations has increased the knowledge base about functional deficits in the areas of cognition, immune competence and fertility. DTEM provided the International Joint Commission with 32 recommendations on the water quality of boundary waters based on exposures, health effects and sociodemographics. DTEM provided technical advice to the Department of State and wrote a chapter for the U.S. government and other countries to use in the Pops Treaty negotiations.

DTEM's Computational Toxicology and Methods Development Branch has collected solid data on 500-1,000 chemicals used for commercial and industrial purposes. Physiologically-based biokinetic (PBBK) modeling, quantitative structure activity analysis and benchmark dose modeling are used to advance this effort. DTEM has applied its research findings and models to investigate chemicals at sites, including PCBs in Anniston, Alabama and exposures in Mossville, Louisiana.

DTEM has developed a strategic plan, trend analysis, qualitative assessment process, and research rules that can be generalized to address chemical mixtures. DTEM's Chemical Mixtures Program was created in 1993 and adopted by EPA and other groups for site assessments and risk assessment guidance for chemical mixtures. DTEM has established Pediatric Environmental Health Specialty Units (PEHSUs) in Canada, Mexico and all ten U.S. regions to specifically focus on environmental health issues in children.

DTEM has developed several tools to provide continuing medical education credits and education to a variety of professional and lay audiences, including case studies in environmental medicine, grand round seminars, site-specific kits, web-based courses, curricula for communities, and mapped approaches to present risk information in

response to emergency events. DTEM's three-volume *Managing Hazardous Materials Incidence* publication includes a film for first responders and healthcare providers to strengthen preparedness capacity at state and local levels. DTEM regularly participates in emergency preparedness simulations and drills conducted by regional response teams. DTEM's research results have been extremely beneficial in emergency response efforts when a chemical is poorly characterized.

The BSC made several suggestions to PPRS to refine the peer review process.

- Consult with Dr. James Stephens, the BSC *ex-officio* representative for the National Institute for Occupational Safety and Health, to obtain lessons learned from the agency's internal and external peer review process by functional area.
- Recognize that the recommendation to EHSB to increase use of the Internet and other interactive technologies to disseminate environmental health data will exclude segments of the population with a need for this information, but no access to these tools. Urge EHSB to continue to distribute information with traditional methods that are accessible to lay audiences.
- Advise APRHB to evaluate groups at risk for asthma to reflect the current heterogeneity and socioeconomic status of the U.S. population. Point out that APRHB's asthma projects solely focus on traditional racial/ethnic groups of African Americans and whites.
- Ask APRHB to describe its relationship with the EPH Tracking Program during the peer review.
- Develop general categories to evaluate and assign quantitative ratings to programs during peer reviews, such as "community services," "research," "Congressional mandate" and "education."
- Encourage DTEM to integrate activities of its Computational Toxicology and Methods Development Branch with the National Exposure Report. Apply this strategy to analyze blood levels of chemicals across the population and compare benchmark doses to blood levels in persons with PBBK modeling.

Dr. Nolan described actions that need to be taken in preparation for the DTEM peer review in February 2006. Reviewers with expertise in the following areas need to be identified to serve on the peer review team: risk assessment, chemical mixtures, biomarker validation for risk assessment, immuno-toxicology, environmental neurotoxicants, computational and genetic toxicology, pharmacotoxicology and toxicological profiles. Partners, customers and users of DTEM's research findings must

also be considered during the peer review, including environmental and occupational health physicians, pediatric environmental health specialists and community members.

Dr. Nolan asked the BSC to provide Dr. Drue Barrett, the PPRS Designated Federal Official (DFO), with the names of appropriate experts to serve on the DTEM peer review team and other issues that should be addressed during the peer review. Dr. Barrett can be reached at dhb1@cdc.gov. Dr. Yang volunteered to represent the BSC on the DTEM peer review team.

Public Comment Period

Dr. Nolan opened the floor for public comments; no attendees responded.

New Laboratory Methods for Detecting Botulism Toxins

Dr. James Pirkle is the Deputy Director for Science in the Division of Laboratory Sciences (DLS). The CDC Director asked DLS to develop new methods to measure botulism toxins because the existing mouse bioassay used in this effort was created >80 years ago and is extremely labor- and resource-intensive. The strategies DLS implemented to respond to this request are outlined as follows. The new laboratory methods focus on detecting botulism toxin types A-G and toxin subtypes. The toxin types were identified by measuring and modifying major proteins at the neuronal junction. Because botulism toxins were found to attack the proteins, experiments were conducted to identify the most attractive peptide sequences.

The experiments showed that the methods would be specific for and sensitive to botulism toxin type A. An analysis was performed to distinguish specificity among the seven toxin types. The findings did not demonstrate any overlap in mass spectrometry peaks if the substrates were combined into one unknown sample. As a result, any single toxin or a combination of the seven toxins could be detected. Specimens previously submitted to CDC were compared to the mouse assay, tested and analyzed to determine whether low-dose levels were clinically inconsequential. Stool samples with minimal amounts of botulism toxic type B and food samples with botulism toxic type E were examined. Milk specimens were also analyzed in a split sample assay with the University of Georgia.

DLS was pleased with the split sample results and plans to conduct similar comparisons with other toxin types and feces in the future. Efforts are now being made to assign quantitative numbers to the botulism toxin activity. Key outcomes based on DLS's experiments are as follows. Two to three days are required to generate the first results with the mouse assay compared to four hours with the DLS assay. DLS's efforts to analyze 1,000 samples per day will most likely require one instrument and six to eight persons. The mouse assay detects four of seven toxins, while DLS is attempting to identify all seven toxins with its assay.

DLS reached a milestone in sequencing ~70% of botulism toxin A1 subtypes and 55% of A2 subtypes in 12 hours. The goal of measuring botulism toxin in serum has almost been achieved. DLS will attempt to set another precedent in the future by clarifying the amino acid sequence of toxins in the subtypes. Specificity will be extremely high if all amino acids can be analyzed. DLS will strengthen its focus in the future to address several areas.

Botulism emergency response activities will be conducted and serum measurements for botulism toxins will be obtained. All botulism subtypes in specimens collected by CDC and states will be characterized. Technologies to screen milk and food samples will be simplified and DLS's laboratory method will be used to screen the entire U.S. milk supply. Anti-toxin doses will be evaluated and additional data will be gathered on the dose response and pharmacokinetics of botulism toxins. The first paradigm to measure the anthrax lethal factor was developed after DLS's laboratory method for botulism toxins was applied in a monkey study. Overall, DLS's research will play a major role in determining the allocation of resources to treat persons who were exposed to botulism toxins and diagnosing individuals with anthrax within 12 hours of exposure.

With no further discussion or business brought before the BSC, Dr. Nolan recessed the meeting at 4:00 p.m. on November 17, 2005 for the BSC to attend a tour of DLS's facilities.

Subcommittee and Workgroup Reports

CTS. Dr. Nolan reconvened the meeting at 8:45 a.m. on November 18, 2005 and yielded the floor to the first presenter. Dr. Cynthia Harris, the CTS Chair, covered the following areas in her status report. Two candidates with strong backgrounds and extensive interests in EPH were selected to serve on the CTS to represent communities and tribes. Dr. Fernandez will serve as the new CTS Chair for the next six months to replace Dr. Harris and Dr. Gasana will serve as a new CTS member to replace Dr.

Nriagu. However, an additional BSC member is still needed to serve on the CTS. Ms. Leslie Campbell of NCEH/ATSDR now serves as the new CTS DFO.

The CTS is providing guidance to CCEHIP on its new EJ policy that is currently being developed to ensure data collection and analysis, health disparities, and public participation and access to information are included. CCEHIP is attempting to circulate a draft of the EJ policy to the CTS and relevant CDC programs for internal review and comment by the end of December 2005. The CTS agreed to monitor this effort to ensure each CCEHIP program incorporates the EJ policy into its individual strategic plan and PPRS includes health disparities and EJ as components of the program review process.

The CTS is reviewing NCEH/ATSDR's health disparities and EJ portfolio. The CTS identified gaps in these activities and requested that additional information be provided on the relationship between the outcome and product, effectiveness of each activity in meeting its outcome, measurability of the outcomes, community involvement in the activity, and lessons learned. The CTS will review NCEH/ATSDR's health disparities and EJ portfolio based on a first tier of five completed activities and a second tier of soon to be completed initiatives. The CTS expects to complete its review of the first-tier projects by the first quarter in 2006. A summary of the targeted projects was distributed to the BSC for review.

The CTS provided PPRS with several recommendations to inform its current efforts to revise and refine peer review questionnaires for programs, partners and management. "Partners/customers" should be clearly defined and expanded to specifically include communities and tribes. Health disparities and EJ issues should be included as a separate section in all three questionnaires. The new section should contain questions in five thematic areas of goals and objectives, communications, impact on partners/customers, evaluation and future directions. The performance of programs in health disparities and EJ should be evaluated during the peer review process based on the five themes.

The CTS requested that NCEH/ATSDR provide status reports on tribal activities that were previously approved by the BSC. These initiatives include the Tribal Nations Clinician Training in Environmental Exposure Project, partnership with the Indian Health Service on the health trends analysis, and the pilot project to link a PEHSU to a tribal community.

The BSC commended the CTS on its extensive activities and diligent efforts to provide NCEH/ATSDR with more focused guidance across all environmental health programs.

The BSC suggested three key actions the CTS should take to refine its focus on health disparities and EJ. First, CCEHIP should be asked to assign a point of contact to ensure programs implement the new EJ policy. Second, NCEH/ATSDR should be urged to allocate resources specifically to health disparities and EJ issues. Third, the HDS should be actively engaged to ensure health disparities and EJ issues are included in state health department activities. The BSC applauded Dr. Harris's outstanding leadership as the CTS Chair.

HDS. Dr. Gayle Windham, the HDS Chair, covered the following areas in her status report. HDS identified several priorities to place on its agenda, including EPH workforce development, terrorism and response, improved surveillance systems, indoor and outdoor air quality, and the built environment. HDS is currently focusing on workforce development issues and took several actions in this effort.

NCEH/ATSDR was strongly urged to support EHSB and its activities, particularly strategies to revitalize EPH services, enhance EPH leadership, and develop an EPH service corps. Several gaps in the EPH workforce were identified. The current focus on services is to the detriment of health issues. EPH staff at the local level have numerous roles and responsibilities. Cross-communication throughout CDC is lacking. The EPH workforce should be provided with continued education and health- and evidence-based training, particularly to strengthen database skills. Information should be disseminated to high schools to encourage students to enter the EPH field.

HDS is now requesting guidance from the BSC in three key areas. First, what strategies can HDS implement to engage CDC programs outside of NCEH/ATSDR that also address workforce development issues? Second, what approaches can HDS apply to interact more closely with other BSC subcommittees? Third, should HDS now shift its focus from workforce development issues to other priorities, such as preparedness planning and the upcoming EPH conference in December 2006? In addition to the BSC's advice on these issues, HDS is also requesting that NCEH/ATSDR support a face-to-face meeting in 2006.

Dr. Frumkin provided feedback on HDS's recommendation for NCEH/ATSDR to "aggressively seek the appropriate level of financial and human resources necessary to fully implement the plan." Actions cannot be taken at the federal level to address this recommendation because governmental agencies are prohibited from lobbying for resources.

The BSC made two key comments in response to Dr. Frumkin's remarks. First, NCEH/ATSDR should make a case internally for the overall CDC budget to allocate

increased resources to the environmental health portfolio. Second, the BSC should be used as a mechanism to express support to continue or expand NCEH/ATSDR programs. For example, the BSC could send a thank-you letter to CDC's Congressional appropriations committee about the allocation of funds to DLS, the critical importance of DLS's research in informing public health, and the role of DLS's facilities as an asset to humanity, the environment and the entire world.

The BSC applauded Dr. Windham for the tremendous amount of time and energy she is devoting to lead the HDS. The BSC's responses to HDS's requests for guidance are outlined below.

- Initiate a dialogue with Dr. Ed Thompson, CDC's Chief of Public Health Practice, about partnerships that have been created with outside groups to enhance workforce development.
- Consider productive methods to strengthen interactions with other subcommittees due to the busy schedules of BSC members. Assign subcommittee members and *ex-officio* representatives to assist other groups for specific tasks only rather than serve as permanent liaisons. For example, an HDS member could be assigned to assist EHSB in developing priorities as recommended by PPRS during the peer review. An EPA representative could be assigned to the CTS on an ad hoc basis because efforts are underway within the agency to incorporate EJ into health disparities and healthy community projects.
- Continue to focus on workforce development issues. For example, an HDS member could be assigned to serve on the planning committee for the EPH conference. This event will serve as a valuable opportunity to advance EPH workforce development and focus on career enhancement, leadership and capacity building at state and local levels.

Based on the BSC's comments, Dr. Windham confirmed that HDS will continue to focus on workforce development for the next six months.

Delisting Workgroup. Dr. John Osterloh is the DLS Chief Medical Officer and Toxicologist. He explained that the ad hoc workgroup was established in February 2005 with BSC members and DLS staff in response to a request by the Office of Management and Budget (OMB). CDC was asked to formulate a plan to remove chemicals from the National Report on Human Exposure to Environmental Chemicals (NER). CDC released the third NER in July 2005 and added more chemicals for a total of 148. Chemicals in the three NERs only represent DLS's existing methods, but the fourth NER will include chemicals recommended through a public nominations process.

OMB has been monitoring progress on the delisting plan. The workgroup's minutes from its three meetings were reviewed and the proposed *Federal Register* announcement on the delisting criteria is also planned for review. The workgroup has extensively discussed the magnitude, level, toxicological relevancy, limitations and ability to detect chemicals. Key components of the workgroup's draft delisting plan are outlined as follows. A renewed nominations and removal process will be combined and simultaneously implemented. Removal criteria will be released for public comment. A call will be made for nominations and requests for removal of chemicals from the NER.

An expert panel of toxicologists will be convened to review the chemicals based on criteria established by the workgroup. For critierion 1, a chemical will be removed from the NER after three survey periods or not less than six years if the level of the chemical did not change or decline in all age, gender and race/ethnicity subgroups. The workgroup generally agrees on this criterion.

For critierion 2, a chemical will be removed from the NER after three survey periods or not less than six years if detection rates are <5% in all subgroups. The workgroup is not unanimous on this criterion. For critierion 3, a chemical will be removed from the NER if a new or replacement chemical or metabolite is more representative of exposure than a chemical that is currently being measured. The three exceptions to the delisting criteria are for chemicals that: have an existing biomonitoring health threshold, are of active public health interest or ongoing investigation, or are a member of a methodological group of chemicals that would otherwise be measured.

The workgroup asked how various % detected rates would affect removal of chemicals from the NER. Based on application to the 3rd NER, 148 chemicals, 97 would be removed using a detection rate of <60% across all populations and 35 would be removed using a detection rate of <5% in the subgroups. Of those 35 chemicals, 23 that are in the dioxin-furan-PCB category (a methodological group) and would therefore not be candidates for removal from the NER. Only two chemicals in the 3rd NER have no measurable detection levels for the population sample size of 2,500 persons.

The workgroup plans to submit the draft criteria to OMB in the near future for review, make revisions and publish the draft delisting plan in the *Federal Register* for public comment. The delisting plan will be finalized based on public comments and published in the *Federal Register*. The workgroup is now requesting guidance from the BSC to refine the draft removal criteria or the entire delisting process. DLS will continue to engage the BSC in the delisting process through the current workgroup or a new ad hoc group.

The BSC engaged in an extensive discussion of the delisting plan and made several suggestions in response to workgroup's request for guidance.

- Consider including the methodology to apply criterion 1 in removing chemicals from the NER since the BSC was unsure of utility of this criterion.
- Examine outliers at the <5% detection rate for subgroups, such as elevated chemical levels or significant exposures in a subset of the population.
- Specify what constitutes a "public health concern or investigation" definition that will be used to remove, retain or add chemicals to the NER.
- Determine whether OMB's original charge to CDC to formulate a delisting plan is actually appropriate.
- Ask OMB to delay the delisting process because valuable input will be obtained to inform this activity during the upcoming peer review of DLS in June 2006 and with publication of the next NER (having three survey periods for application of the proposed criteria).
- Maintain the workgroup's proposed schedule to solicit comments, revise, finalize and publish the delisting plan because OMB charged CDC with undertaking this effort.
- Define DLS's specific role in the delisting process, such as formulating and issuing recommendations for public comment.
- Add explicit language in the delisting process that clearly states CDC or the HHS Secretary will make the final determination on removing chemicals from the NER.
- Explicitly state that in some cases delisting chemicals from the NER will not save costs (viz., per above, methodological groups).
- Revise criterion 3 to specifically require rather than imply the addition of a new biochemical marker.

Other topics related to the NER but not the delisting process:

- Consider including chemical interactions or mixtures in the NER.
- Solicit guidance from persons with expertise in specific scientific and technical areas who are not currently represented on the workgroup, such as exposure modelers, pharmacokineticists and DTEM staff.
- Explore the possibility of re-analyzing chemicals that were removed from the NER every five or ten years. Consider this strategy because current data do not justify total and permanent removal of chemicals from the NER, particularly those used for exposure assessments.

- Identify flexible mechanisms other than the National Health And Nutrition Examination Surveys to collect data in the future because many subgroups are not captured in the NER. Explore the possibility of expanding the NER to include other subgroups.

Dr. Nolan noted that the BSC's comments did not indicate consensus on the workgroup's proposed delisting plan. As a result, issues, concerns and suggestions raised by the BSC during the discussion will be compiled and forwarded to the workgroup and PPRS in preparation of DLS's upcoming peer review in June 2006.

Public Comment Period

Dr. Nolan opened the floor for public comments; no attendees responded.

Open BSC Discussion

Dr. Nolan opened the floor for the BSC to make comments or provide input on any of the agenda items presented during the meeting. The BSC was encouraged by and pleased with the future direction of NCEH/ATSDR under the new leadership of Dr. Frumkin. The BSC was also extremely impressed by the tour of DLS on the previous day, particularly its facilities, new technologies and staff. The BSC emphasized that the DLS laboratory serves as the gold standard for environmental health issues throughout the world.

Many members expressed concern about the extremely short discussion periods following each presentation. Most notably, the BSC was unable to provide extensive input on NCEH/ATSDR's future goals, direction and new priorities established by Dr. Frumkin. The members noted that meeting agendas must be structured to allow the BSC to fulfill its charge of providing scientific guidance on NCEH/ATSDR's environmental health activities.

The members also pointed out that agendas with numerous and lengthy presentations limit the BSC's ability to actively rather than passively contribute to the overall process of strengthening CDC's environmental health portfolio. To address this concern, the BSC recommended that presentations be distributed to the members in advance of

meetings for review. Moreover, speakers should be given and adhere to a strict time limit to present information to the BSC.

Several members also expressed concerns about the PPRS report. Key outcomes of the EHSB peer review were not clearly explained and EHSB's response to the peer review appeared to be "defensive." Dr. Nolan asked the members to consider approaches for the BSC to clearly report findings of peer reviews and programs to effectively respond to PPRS's recommendations in the future.

BSC Business

The next BSC meeting will be convened on May 18-19, 2006 for two full days rather than the traditional time period of 1.5 days. Day 1 of the meeting will be structured as a "retreat" for the BSC to engage in an extensive discussion of NCEH/ATSDR's future goals, direction and new priorities. The following BSC meeting will be convened on December 6-7, 2006 in conjunction with the EPH conference. The traditional structure will be changed in which the half-day session will be held on day 1 after the EPH conference is adjourned and the full-day session will be held on day 2.

Dr. Nolan directed the BSC to address three key issues and provide comments to her and Dr. Sinks in preparation of the December 2006 meeting. First, BSC meetings are open to the public, but should participants of the EPH conference be specifically invited to attend the meeting and provide input to the BSC? Second, if so, what topic should serve as the major theme of the meeting to guide the discussion, such as biomonitoring or EPH tracking? Third, what is the feasibility for the CTS and HDS to also hold face-to-face meetings during this time in light of the schedules of BSC members?

The consensus recommendation, action items and agenda item raised by the BSC over the course of the meeting are outlined below. The consensus recommendation was properly moved, seconded and unanimously approved by voting members with no abstentions.

Consensus Recommendation

- *PPRS's report of the EHSB peer review is accepted.*

Action Items

- *Dr. Sinks will distribute NCEH/ATSDR's portfolio of health disparities and EJ activities to the BSC.*

- *Dr. Nolan will obtain information from NCEH/ATSDR to draft a letter to Congress about the important role of DLS's activities in environmental health. She will circulate the draft letter to BSC for review and ask the members to decide whether one letter should be submitted to Congress as a formal BSC communication or if multiple letters should be sent from individual constituency groups.*
- *Dr. Sinks will facilitate HDS's communications with Dr. Ed Thompson and Dr. Steven Thacker, Director of the Office of Workforce and Career Development.*
- *Dr. Frumkin's office will provide the HDS with an inventory of NCEH/ATSDR's training and capacity-building activities.*

Agenda Item

- *Extensive half- or full-day BSC discussion on NCEH/ATSDR's future goals, direction and new priorities established by Dr. Frumkin.*

Closing Session

Dr. Frumkin thanked the BSC for providing NCEH/ATSDR with valuable input on the agenda items over the course of the meeting. He acknowledged the diligent efforts of both professional and administrative staff in planning an extremely productive meeting.

With no further discussion or business brought before the BSC, Dr. Nolan adjourned the meeting at 12:30 p.m. on November 18, 2005.

I hereby certify that to the best of my knowledge, the foregoing Minutes of the proceedings are accurate and complete.

Date

Patricia Nolan, M.D., M.P.H.
Board of Scientific Counselors Chair

ATTACHMENT 2

List of Acronyms

APRHB	— Air Pollution and Respiratory Health Branch
BSC	— Board of Scientific Counselors
CCEHIP	— Coordinating Center for Environmental Health and Injury Prevention
CDC	— Centers for Disease Control and Prevention
CTS	— Community Tribal Subcommittee
DFO	— Designated Federal Official
DLS	— Division of Laboratory Sciences
DTEM	— Division of Toxicology and Environmental Medicine
EHSB	— Environmental Health Services Branch
EJ	— Environmental Justice
EPA	— U.S. Environmental Protection Agency
EPH	— Environmental Public Health
FEMA	— Federal Emergency Management Agency
HDS	— Health Department Subcommittee
HHS	— Department of Health and Human Services
HPRG	— Health Protection Research Guide
NCEH/ATSDR	— National Center for Environmental Health/Agency for Toxic Substances and Disease Registry
NER	— National Report on Human Exposure to Environmental Chemicals
OMB	— Office of Management and Budget
PBBK	— Physiologically-Based Biokinetic
PEHSUs	— Pediatric Environmental Health Specialty Units
PPRS	— Program Peer Review Subcommittee