

2004 Meetings and Conference Call Schedule: June 23 (2:00 p.m. EDT), July 21 (Meeting), September 8 (11:00 a.m. EDT), October 19 (Meeting), December 15 (11:00 a.m. EST)

Shanghai Health Study

Subscription Research Background Information

Subscription Research Programs are research projects that are funded outside of the regular API dues budget structure to fund research on behalf of the petroleum industry. These programs are designed to enable funding by both API members and non-members. Subscription research programs serve as a vehicle to conduct large, long-term research, which can be difficult to accomplish within the current API yearly budget cycle.

The Shanghai Health Study is the most recent addition to the subscription research programs administered by API.

Shanghai Health Study

Purpose: To gain an accurate understanding of the relationship between benzene exposure and the risk of certain hematopoietic (blood and blood forming organs) diseases. This study is an important element in the product stewardship programs of participating companies. It can also lead to improved benzene-driven, health-based regulatory (e.g., ambient air, water & occupational) standards worldwide, by providing the regulatory and scientific communities with information for more accurate assessment of the risks from exposure to benzene.

Benefits: Information gained from this project will have a direct relevance for worldwide regulatory standards designed to protect workers and the general population from benzene-induced disease. These include air and water quality standards, as well as hazardous waste and site remediation standards. These studies will assist contributing companies (or, industry) in achieving the highest product stewardship goals and in oversight of their risk management programs.

A unique set of circumstances exists at this point in time in Shanghai to conduct meaningful benzene research. These include a database of occupational exposures in a different regulatory environment, and willing and qualified co-investigators influential in local scientific medical, and regulatory establishments. Therefore, questions that have plagued (plagued seems a little strong; how about questions that have been troublesome for) benzene health risk assessment for decades appear to be answerable in Shanghai.

The Studies: The program involves three inter-related studies:

- Case-Control Study - A hospital-based case control study to investigate the potential relationship between benzene exposure and both Non-Hodgkins Lymphoma (NHL) and Acute Myelogenous Leukemia (AML), including an attempt to quantify the potency of benzene for the AML response.
- Disease Progression Study - A hospital/clinic-based investigation of the relationship between non-cancer diseases of the bone marrow (e.g. xxx, yyy) and AML (cancer) to determine if effects on bone marrow progress through non-cancer stages to an ultimate leukemia. This study would also attempt to define the shape of the dose response for possible "precursor" diseases and could result in characterization of unique identifiers of benzene-induced AML.
- Molecular Epidemiology Study - Investigate if there is a quantitative relationship between benzene exposure and potential early indicators of both exposure and effect in a focused population of workers. (This is not my understanding of the ME study. I thought that it was

looking for bio-markers as indicators of change resulting from benzene exposure. Also, this implies more on the exposure side than I thought that we could expect.)

The investigators are leading experts in their fields, coming from such well-known institutions as the University of Colorado Health Sciences Center and Fudan University Medical Center and Applied Health Sciences in the private sector. The combined studies apply cutting-edge, 21st century technologies in ways that will not only advance our understanding of benzene-induced disease, but may also identify potential prevention strategies benzene-induced disease in individuals. (how is our study doing this?)

Challenges: The proposed studies meet several technical, ethical, and cultural/political challenges.

- Technical - In order to stand up to scientific scrutiny, studies must be large, well-managed, independent, and incorporate the latest technology. State-of-the-art research is absolutely necessary to make real progress in developing sound benzene risk assessments. To that end, a Scientific Review Panel made up of leading experts from a number of fields relevant to these studies has reviewed and endorsed the research protocols. Additionally, the protocols have been reviewed by Use of Human Subjects Committees (IRB) both in the US and China.
- Ethical - To address the ethical issues, the study protocols have all undergone a thorough analysis to ensure that they meet international standards for research involving humans, including that the subjects and participating communities benefit from having participated in the study; that confidentiality is preserved, and that researchers are working with local regulatory authorities to improve worker safety. An Ethics Review Panel is part of the oversight for the project and includes a Chinese bioethicist.
- Cultural/Political – A key to this program's success is local partnerships. Collaborators on these studies include researchers from the Medical School at Fudan University, the Institute for Public Health Supervision, and the Shanghai Municipal Centers for Disease Control and Prevention (the latter two are responsible for occupational exposure monitoring and enforcement in Shanghai).
- Sponsors, Benzene Health Research Consortium

BP, ChevronTexaco, ConocoPhillips, ExxonMobil, Shell Chemical Company

DRAFT AG E N D A
DOWNSTREAM COMMITTEE
American Petroleum Institute
Wednesday, May 12, 2004 – 8:00 a.m. – Noon CT— Houston, TX

Continental Breakfast 7:30 a.m.

8:00 a.m.	Introductory Remarks	Gary Heminger Chair, Downstream Committee
8:05 a.m.	Presentation by a Member Company on Activities to Improve Environmental and Safety Performance	Jeet Bindra, ChevronTexaco
8:30 a.m.	National Energy Bill • Status and strategies for the future Action: Provide guidance on further advocacy efforts	Patricia Richards Chair, Transportation Fuels Committee
9:00 a.m.	NAAQS • Review EPA's anticipated final rule implementing the 8-hour ozone standard • Results of April 23 NAAQS strategy discussions among API committees of jurisdiction Action: Provide guidance on advocacy goals and objectives	Bob Hermanson Chair, Title I Task Force Gerry McPhee Chair, Environmental Strategies Committee
9:30 a.m.	Fuels Committee Activities • Review EPA's non-road diesel rule • Northeast states initiatives: low sulfur heating oil, regional fuels • NAAQS implementation issues for fuels • Auto's Top Tier Gasoline Program Action: Provide guidance on strategies to address the above	Mike Leister Chair, Fuels Committee
10:00 a.m.	API Health Effects Subscription Research Programs • Overview of API Programs • Status of Shanghai Health Study (China Benzene) ○ Potential business impacts ○ Use in advocacy	Ed Murphy Downstream Group Director Patsy Clegg, Chair, Benzene Health Research Consortium Oversight Committee
10:45 a.m.	API Involvement in International Activities • World Petroleum Congress • IPIECA (global climate, corporate reporting, transparency, corporate social responsibility) • UN Partnership on Clean Fuels and Vehicles	Brian Harney/Brian Doll ExxonMobil
11:15 a.m.	Update on Strategic Communications Steering Committee • Next phase of planning: envisioned future	Pamela Beall MarathonAshland
11:20 a.m.	DOE's FreedomCar & Fuel Partnership Executive Steering Group Activities • Partnership operating issues: intellectual property and confidentiality • On-board fuel processor R&D continuation: DOE's decision-making process	Joe Kaufman Chair, Fuel Operations Group
11:30 a.m.	Marketing Committee Activities Update • Gasoline supply and communications activities, underground	Mary Ellen Peters Chair, Marketing

	storage tank legislation, SPCC litigation, effluent guidelines rulemaking	Committee
11:45 a.m.	Other Business • Review 2005 Budget Time Line and 2005 Major Issues	Ed Murphy
Noon	Adjournment	Gary Heminger

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