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## **MESSAGE FROM THE ENVIRONMENTAL DIVISION CHAIR**

This newsletter arrives at the end of an interesting and challenging year. From a personal point of view this year has been a reminder of how closely coupled we are to the natural environment. We experienced a “500 year” flood (just thirteen years after experiencing a 100 year flood). This flood caused \$300M of damage to the University of Iowa’s infrastructure, including over \$40M dollars of damage to my research building. We are just now moving back-in on a temporary basis as we develop a comprehensive mitigation strategy. The human and environmental dimensions of the flood impacts are much more significant. We are now very engaged in the concept of how we do a better job of *living with floods*.

From viewpoint of the environmental division we are finishing the year on a high-note. The National meeting was a great success. We presented a record number of sessions on timely and important topics. A highlight of the meeting was the Lawrence K. Cecil lecture by Professor Menachem Elimelech of Yale University. At the division business and programming meetings we had lively discussions regarding the future direction of the division and are well on our way in the planning of next years programming. The environmental programming at the Spring 2009 meeting in Orlando is exciting and described in more detail below. We hope to see many of you there.

We also want to take this opportunity to welcome our new slate of officers. Raymond Smith was elected Second Vice-Chair, Andreas Linninger and Pratim Biswas were elected as new Directors, and Robert Peters was re-elected as Secretary. Further information introducing you to the new officers is presented later in the newsletter.

As we enter 2009, the nation faces significant challenges. I am optimistic that with our new leadership in Washington we will emerge stronger, and more firmly committed to sustainable solutions. The environmental division and our members have important roles to play. I am confident that under the leadership of Jost Wendt that the division will continue to thrive. I have greatly enjoyed serving as the chair of the division.

**(Greg Carmichael’s photo)**

### **2009 Election Results and Updated List of Officers**

One of my responsibilities as an immediate past chair is to organize the Division’s annual election to fill out some elected officers’ positions. To this effort, I want to thank Nina Scatton at AIChE HQ for her support in the election process. I am pleased to announce

the election results as follows: Raymond Smith was elected Second Vice-Chair; Pratim Biswas and Andreas Linninger were elected as new Directors; and Robert Peters was re-elected as Secretary. I want to take this opportunity to congratulate and welcome our newly elected officers. Also, I want to congratulate Mary Ellen Ternes and Arunaprakash Karunanithi for being nominated at the election and do sincerely hope that they will run again next year. I extend my invitation to the Division members to come forward to serve as an officer. Please contact Greg Carmichael or other officers for further details. For your information, I am pleased to provide you with an updated list of the Environmental Division officers as follows:

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## Climate Change

On the national regulatory front, public comments on EPA's July 11, 2008 Advanced Notice of Proposed Rulemaking (ANPR) to regulate Greenhouse Gases (GHG) under the Clean Air Act (CAA) are requested through November 27, 2008. 73 Fed. Reg. 44354. In the meantime, a new report entitled "A Regulatory Burden: The Compliance Dimension of Regulating CO<sub>2</sub> as a Pollutant," issued September 16, 2008 for the U.S. Chamber of Commerce, provides that CO<sub>2</sub> regulations would apply to approximately one million commercial buildings, 200,000 manufacturing facilities and 20,000 large farms, in addition to the 150,000 stationary sources currently regulated under the CAA. The report also provides that the 250-ton emissions threshold currently triggering CAA regulation would apply to facilities using about \$70,000 of oil or gas fuel per year.

As of this writing, EPA is overdue to release its GHG Reporting Rule (Fiscal Year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), while EPA's July 25, 2008 UIC carbon sequestration rule comment period remains open for 120 days after its publication (Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO<sub>2</sub>) Geologic Sequestration (GS) Wells, 73 Fed. Reg. 43491 (proposed rule)).

Turning to legislative developments anticipated for next term, the U.S. House of Representatives Energy and Commerce Committee, sponsors Chairman John D. Dingell, and Rick Boucher, Chairman of the Subcommittee for Energy and Air Quality, released a climate change legislation discussion draft on October 7, 2008 which provides for amendments to the CAA to impose an economy wide carbon cap and trade program. The proposal covers 88% of U.S. GHG emissions and would reduce covered GHG emissions to 6% below 2005 emission levels by 2020, 44% below 2005 emissions levels by 2030 and 80% below 2005 levels by 2050. Hydrofluorocarbons would be addressed by CAA Title VI. The proposal would cover power plants, producers and importers of petroleum and other fossil fuels, large industrial facilities, production and importation of other bulk gases, natural gas local distribution companies and geologic sequestration sites. Also anticipated for the next legislative term are additional measures addressing carbon sequestration and GHG reporting systems.

Regional GHG emission reduction initiatives are making progress. On September 25, 2008, the Regional Greenhouse Gas Initiative (RGGI) completed its first auction of CO<sub>2</sub> emissions allowances with six of the ten RGGI states participating, and 12.56 million tons of CO<sub>2</sub> allowances offered. Reported results from this first auction provide that fifty-nine separate entities submitted bids for a total of 51,761,000 allowances, with a clearing price of \$3.07, which is 61% higher than the "reserve" (minimum) price of \$1.86, generating \$38,585,783 in proceeds. Also, on September 23, 2008, the Western Climate Initiative issued its final plan for a comprehensive multi-sector carbon emissions cap-and-trade program with a goal of reducing GHG emissions from all major GHG sources to 15% below 2005 levels by 2020.

## Clean Air Act

As reported in the last issue, the D.C. Circuit Court of Appeals vacated EPA's Clean Air Interstate Rule on July 11, 2008, surprising all parties. *State of North Carolina v. Environmental Protection Agency*, No. 05-1244 (D.C. Cir. 2008). On September 24,

2008, EPA, industry and environmental groups requested a new hearing before a full federal appeals court to reconsider the decision. While the case is ongoing, members of Congress have been meeting to discuss legislative enactment of significant elements of CAIR during the next term. Additionally, as reported previously, the D.C. Circuit had also vacated the Clean Air Mercury Rule (CAMR) on February 8, 2008. *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). On September 17, 2008, the Utility Air Regulatory Group petitioned the U.S. Supreme Court to review the decision vacating CAMR, asking to have the rule reinstated. *Utility Air Regulatory Group v. State of New Jersey*, No. 08-352 (Sept. 17, 2008), 2008 WL 4294884 (U.S.).

On August 19, 2008, the D.C. Circuit vacated EPA's December 2006 Title V periodic monitoring rule prohibiting state and local regulators from requiring industrial plants to implement more stringent pollutant monitoring than required by federal regulations. *Sierra Club v. EPA*, D.C. Cir. No. 04-1243 (August 19, 2008) (vacating portions of EPA periodic monitoring regulations codified at 40 C.F.R. §§ 70, 71 and 64). This decision resolves over ten years of litigation over supplemental air monitoring requirements in CAA Title V operating permits.

On August 25, 2008, many states, New York City and the District of Columbia sued EPA for failing to address GHGs in the petroleum refinery New Source Performance Standard. *New York v. EPA*, D.C. Cir. No. 08-1279 (Aug. 25, 2008) (challenging Standards of Performance for Petroleum Refineries, 73 Fed. Reg. 35867 (June 24, 2008) (codified at 40 C.F.R. Part 60, Subpart J)).

### Waste

EPA finally promulgated its Redefinition of Solid Waste. As we know, in order for a material to constitute a "hazardous waste," it must first constitute a "solid waste." On October 7, 2008, EPA signed a final rule revising the definition of solid waste to exclude certain hazardous secondary materials from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA), intending to encourage recycling and also respond to several court decisions concerning the definition of solid waste (as of this writing, not yet published in the Federal Register; rule will be effective within sixty days of publication in the Federal Register). With this rule, EPA intends to provide more streamlined requirements for: (1) materials that are generated and legitimately reclaimed under the control of the generator (i.e., generated and reclaimed on-site, by the same company, or under "tolling" agreements); (2) materials that are generated and transferred to another company for legitimate reclamation under specific conditions; and (3) materials that EPA or an authorized state determines to be non-wastes through a case-by-case petition process. The rule also contains a provision to determine which recycling activities are legitimate under the new exclusions and non-waste determinations. In order to be legitimately recycled under these exclusions, the hazardous secondary material (1) must provide a useful contribution to the recycling process; and (2) the recycling must make a valuable new intermediate or final product. Also considered: (1) whether the recycled material is managed as a valuable product; and (2) whether the recycled product contains toxic constituents at significantly greater levels than a non-recycled product made from virgin materials. Significantly, these exclusions are not available for materials that are: (1) considered inherently waste-like; (2) used in a manner constituting disposal; or (3) burned for energy recovery. The final rule differs from the proposed rule in some

respects, including reporting and recordkeeping and financial assurance. Entities intending to take advantage of the new flexibility provided by this rule should read both the rule and the preamble very carefully for guidance contemplating specific waste handling and recycling scenarios. This final rule is currently available at:

<http://www.epa.gov/epawaste/hazard/dsw/rulemaking.htm#2008>.

On August 13, 2008, EPA announced it is considering more reliable tests to be used with its Toxicity Characteristic Leaching Procedure (TCLP), currently the only test required in determining the “toxicity” characteristic of hazardous waste. The TCLP has been proven to be unreliable in many instances, particularly where a waste material is highly basic or acidic, or where other conditions render the material more leachable in the environment than is predicted by TCLP, such as varying amounts of water reaching wastes and the amount of chemical reactions taking place in wastes. See *Columbia Falls Aluminum Co. v. EPA*, No. 96-1234 (D.C. Cir. April 3, 1998) (recognizing that the TCLP does not properly characterize spent potliner waste K088).

### Water

On September 29, 2008, EPA issued a new general permit for industrial stormwater discharges. The permit will be used in EPA Regions 1, 2, 3, 5, 6, 9, and 10. EPA Regions 4 and 8 are issuing their own permit. This will regulated stormwater discharges in Alaska, Idaho, Massachusetts, New Hampshire, New Mexico and parts of Texas, Oklahoma, District of Columbia and other areas where EPA constitutes the permitting authority. See 73 Fed. Reg. 56572 (September 29, 2008) (replacing MSGP 2000 which expired on October 30, 2005) (available at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>).

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