

# Risk Policy Report

An exclusive weekly report for scientists interested in environmental policymaking and policymakers interested in science

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## California Report Cites TSCA As Green Chemistry Barrier, Urges New Law

A new report on green chemistry commissioned by California regulators finds that the Toxic Substances Control Act (TSCA) — the federal law for managing toxic chemical risks — is a highly flawed barrier to green chemistry and is largely responsible for the costly adverse health effects the report associates with current chemical controls. The report recommends a new legal framework for California that takes a different approach from TSCA.

The findings come as California is in the midst of developing the nation's first-ever Green Chemistry Initiative that is being closely watched by industry and activists as a likely precedent for such initiatives in other states and possibly at the federal level.

The report, written by a University of California (UC) panel, calls for California to take the necessary legislative and regulatory action needed to implement its precedent-setting "comprehensive" green chemistry policy.

The report's criticism of TSCA will likely support environmentalists' and environmental health experts' arguments that California EPA's (Cal/EPA) Green Chemistry Initiative should pursue a different direction from the federal chemical statute, which critics say is too weak to spur

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## EPA Will Soon Seek SAB Review Of Major 'Ecosystem Services' Transition

An EPA research program that is leading the agency's transition to a major new approach for assessing and managing ecosystem risks is seeking input from its Science Advisory Board (SAB) on the program's plans so far, including EPA efforts in four regions across the country to test the new approach.

EPA will hold a consultation with SAB in April, where the agency's Ecological Research Program (ERP) staff will present work being prepared by some 200 EPA scientists on the "ecosystem services" approach to ecosystem protection the agency is embracing and will adopt by 2009.

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## New Study May Bolster Activists' Push To Broaden NIEHS BPA Assessment

Environmentalists will soon present a new study to the National Institute of Environmental Health Sciences (NIEHS) to support their argument that an NIEHS assessment of the widely used plasticizer bisphenol-A (BPA) improperly excluded key studies that strongly link the chemical with reproductive risks.

The activists hope the new study will persuade an NIEHS panel that will issue a final report on BPA this summer to include the previously rejected studies.

NIEHS' final position on BPA, written by its National Toxicology

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## EPA Will Soon Launch Agency Laboratory Review, Eying Risk Issues

EPA will soon launch a three-year national review of agency laboratories that provide core human health and ecological risk data with an eye to assessing whether the current laboratory system is adequate to address emerging risk issues or needs to be modified. Because EPA laboratories can serve a pivotal role in the agency's goal of making science-based decisions, the laboratory review process is almost certain to have implications for agency programs that rely on science.

In the past year EPA's plan for a laboratory review has drawn attention

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both nuclear weapons and power plant meltdowns and their known ability to adversely impact human health.

For Strontium-90, the MCL is 8 picocuries per liter (pCi/L), a cancer risk of approximately two in 100,000 according to EPA data, meaning the 1-in-10,000 cancer risk level is reached at a concentration of approximately 39 pCi/L. The 1993 guidance would therefore suggest providing alternative water sources at the 39 pCi/L concentration, since that is the higher level.

The new EPA guidance however suggests emergency responders need not provide an alternative water source until Strontium-90 concentrations reach 6,730 pCi/L — a level 173 times higher than the 39 pCi/L level. *Relevant documents are available on InsideEPA.com. See page 2 for details.*

EPA however is maintaining its defense of the document, arguing that addressing the aftermath of a catastrophic radiological incident is different from a removal action. “The numbers don’t coincide because they are being used for different purposes,” the EPA spokeswoman says. — *Douglas P. Guarino*

## **NEW REPORT SAYS TSCA BLOCKING GREEN CHEMISTRY . . . begins on page one**

progress in finding safer chemical substitutes. But chemical industry representatives are arguing that the California initiative should hew closely to TSCA requirements.

Observers who view the Cal/EPA program as a potential bellwether for similar efforts elsewhere are closely tracking California’s debate, including the just-released report. Federal lawmakers, activists and EPA are among the interested groups tracking California’s efforts because they are interested in green chemistry as a way to design chemicals with relatively benign properties, posing less risk to human health and the environment than chemicals designed without considering green chemistry principles.

The report, *Green Chemistry: Cornerstone to a Sustainable California*, says data, safety and technology “gaps” are preventing the “adequate regulation of chemicals” and are discouraging investment in green chemistry research and development. It says these gaps stem largely from “weaknesses” in TSCA. The report was commissioned by Cal/EPA and jointly issued by UC Berkeley and UC Los Angeles. Over 120 UC professors signed the report, which was released Jan. 17. *The report is available on InsideEPA.com. See page 2 for details.*

The new findings come as the Green Chemistry Initiative’s science advisory panel held its first meeting Jan. 10, and Cal/EPA staff members are in the process of cataloging comments garnered from public hearings on the initiative last year, a state source says. The Cal/EPA initiative is expected to examine and make recommendations on how to best evaluate chemical risk, reduce exposure to substances and encourage less-toxic processes in the manufacturing of chemicals.

A source tracking the issue says the report drives home that “California has to take the lead” on green chemistry, due to “a lack of leadership in the U.S. administration.” The source hopes that the report will drive action in California and says there is “no question” that it is also relevant to chemical regulations and statutes at the federal level.

One of TSCA’s weaknesses, the report says, is that it does not require chemical producers to “investigate or disclose information about the hazardous properties of their chemicals and products.” Any “comprehensive chemicals policy” pursued in California should require chemical producers and product manufacturers “to provide hazard and tracking data as a condition of use or sale” in the state, the reports says. It also calls for the identification of the best toxicity testing methods; research and development into new testing methods; and the creation of an independent panel to define those hazard traits that should be used as the scientific basis for decisionmaking.

TSCA and other statutes do not require chemical producers to “assume full responsibility for the health effects and environmental consequences that can occur over the lifecycle of their products . . . there is little impetus to minimize the potential hazards associated with the manufacture, use or disposal of chemicals and products,” the report notes.

To address this so-called “safety gap,” the report suggests a “new legal framework” is necessary to give California agencies the necessary tools to “efficiently identify, prioritize and mitigate chemical hazards” in any instance where there are “reasonable grounds for concern” — even if “complete hazard or tracking data [are] not yet available.”

Last year the European Union adopted a new regulatory program — Registration, Evaluation & Authorization of Chemicals (REACH) — that requires all chemicals manufactured or imported into EU countries to be tested for health and safety effects. Some activists regard the REACH approach as a model to be copied in the United States because it forces industry to provide data on the chemicals used in commercial products.

Besides recommending a new legal framework, the Cal/EPA-funded report calls for California to do more to “support green chemistry research, education and implementation.” Currently, the “transition from concept to commercial application” can require expensive research and development efforts by industry, which may serve as a disincentive to investment in green chemistry ventures, the report notes. It says this is resulting in a “technology gap” that could place California, and the U.S., at a competitive disadvantage in the international marketplace.

The source tracking the issue says the report makes the argument that California “can’t afford to do nothing” on

green chemistry. For example, the report says preventable childhood disease attributable to chemical exposures cost California \$1.2 billion in 2004, and that preventable diseases related to workplace chemical exposures amounted to an additional \$1.4 billion in 2004.

The source adds that, if California does adopt a comprehensive green chemistry approach, it could attract investment to the state, making it a leader in the green chemistry sector.

But much will hinge on the direction Cal/EPA's Green Chemistry Initiative takes as state officials resolve the disagreements raised in the heated debate among stakeholders. In arguing for the program to be consistent with TSCA, one industry source says the federal law is "strong and protective of public health and the environment." But environmentalists and some health researchers say TSCA is deeply flawed, and they will likely use the new UC report to support their arguments (*Risk Policy Report*, Oct. 9, p3).

In Congress, legislation to create a federal green chemistry research program is stalled in the Senate. The House passed H.R.2850, the Green Chemistry Research and Development Act of 2007, in September, sending it to the Senate where it was referred to the Committee on Commerce, Science and Transportation. A Senate source says it is unclear whether the committee will take up the bill this year.

The bill would create a federal program to provide interagency coordination on discovering and disseminating in commerce environmentally benign chemicals and substances. If passed, the bill would have made EPA research chief George Gray a co-chair of the working group responsible for implementing the effort (*Risk Policy Report*, Sept. 11, p10). — *Matt Shipman*

## **EPA ADVISORS PUSH FOR CLIMATE RISK ANALYSIS IN NEW PM NAAQS REVIEW**

Some members of a key EPA scientific advisory panel are urging the agency to consider the human health and ecological risks of climate change as part of its review of national particulate matter (PM) air quality standards. In preliminary comments on the agency's draft review plan, the advisors say that EPA should focus the national ambient air quality standard (NAAQS) review on both the impact of PM on greenhouse gas emissions and vice versa.

Additionally, several members of the Clean Air Scientific Advisory Committee (CASAC) are also urging EPA to review the particles based on their composition — an approach known as "speciation" — that could move the agency away from regulating PM based on size and toward requirements that are based on the toxicity of particles from a given source.

And one panel member links the climate and speciation issues, saying the importance of addressing climate change could push the agency to embrace speciating particles in this review because sulfate particles are generally thought to lower the earth's temperature by reflecting solar radiation back into space.

"One could see that given the very different impacts sulfate has on visibility and climate versus other components, there is an added impetus to consider the different impacts of individual species, with consideration for species-specific standards for both the primary and secondary NAAQS," CASAC panelist Armistead Russell says in comments to the agency. *Relevant documents are available on InsideEPA.com. See page 2 for details.*

Individual members of the CASAC PM review panel Jan. 3 sent EPA a consultation on the agency's draft integrated PM NAAQS review, which does not necessarily reflect a consensus of the panel.

The panel also addressed other key issues in the preliminary comments on the draft PM review plan, for instance advocating that EPA address the possibility of a new standard for "ultrafine" or nanoparticles, and voicing concerns about the agency's planned use of "expert elicitation," or uncertainty analysis.

An EPA source calls speciation recommendations "a potentially huge component of this study" and says it is likely the full panel will eventually recommend that EPA take the speciation approach in its review of the PM standard.

Speciating particles is a controversial issue in the PM NAAQS review because many experts say the science has not advanced far enough to be able to set standards to address specific particle components, as PM is a complex mix of aerosols that react with other compounds. But others argue the science is advanced enough to begin addressing speciation in the NAAQS, noting that several ongoing studies will likely be available by the time the PM risk assessment is due in 2010, they say.

EPA in its October draft Integrated Review Plan (IRP) lists climate-related impacts as one of the issues to be considered in the review of the secondary, or human welfare standard, which includes effects on vegetation, animals, weather and climate. But the agency does not include climate impacts in the primary PM NAAQS review focusing on human health, prompting many of the CASAC comments.

Some CASAC members are urging the agency to enhance its plan to review PM-climate change interactions to include both the secondary and primary standards. Other panelists say EPA needs to clarify how the climate impacts issue will be handled.

The IRP is part of a new, revised NAAQS review process, and it lays out what will be included in the Integrated