

Risk Policy Report

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

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California's 'Hot Spot' Risk Guidelines May Trigger Tighter State Air District Rules

Newly released updates to California's risk assessment guidelines for studying air pollution near industrial facilities in the Golden State, or "hot spots," include higher cancer risk estimates that may lead air districts to tighten rules on certain facilities, sources said.

The Bay Area air district, for example, may now advance new rules for certain facilities based on the updated risk guidelines, sources said. Environmentalists have pressed the Bay Area district to advance tighter facility air pollution risk rules, but the district wanted to wait for the state's Office of Environmental Health Hazard Assessment (OEHHA) to release the updated document, sources said. It has been more than a decade since OEHHA last updated the facility risk assessment guidelines; the new document incorporates the latest research on health risks, according to officials.

OEHHA Nov. 7 released for public review an update to its Air Toxics Hot Spots Program Risk Assessment Guidelines. The report is described as a technical support document for exposure assessment and "stochastic analysis." OEHHA initiated a 60-day public comment period that ends Jan. 6. OEHHA plans

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EPA Considers New Approaches To Calculating Inhalation Risk Estimates

EPA staff are preparing to begin reviewing their existing approach for estimating non-cancer inhalation risk from chemical exposures, one of four risk values EPA generally includes in its risk assessments, and are weighing a modeling approach that may be less conservative than the current default method, according to a recently released EPA review.

Should EPA eventually adopt less conservative methods, it could address some of industry groups' concerns that the agency's Integrated Risk Information System (IRIS) assessments — that are often the basis for agency regulations and other decisions — are too conservative.

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EPA Study Hints At Fracking As Source Of Drinking Water Contamination

EPA's research office is probing a Wyoming contamination case after the latest round of monitoring points to hydraulic fracturing as a potential contributor to drinking water pollution, a finding that if confirmed is likely to intensify calls for EPA to regulate the controversial natural gas extraction practice.

According to the preliminary study results, unveiled at a public meeting in Pavillion, WY, Nov. 9, the agency found the presence of chemicals commonly used in hydraulic fracturing fluids, such as benzene, naphthalene and diesel, that in some cases exceed agency drinking water limits. *The document is*

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Advisers Question Risk, Cost Approaches In Draft Microbial Risk Guide

A panel of experts reviewing draft guidelines developed jointly by EPA and Agriculture Department (USDA) scientists for assessing microbial risks is questioning the agencies' conservative risk assessment approach and lack of cost-benefit analyses, suggesting the agencies focus instead on options for reducing risks with available resources.

EPA and USDA have been leading a government-wide group of scientists in drafting a framework for how to conduct microbial risk assessments (MRA), which EPA uses to craft water regulations.

The document indicates that it "primarily focuses on infectious diseases

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Activists Cite Draft Arsenic Assessment In Bid For Strict Coal Ash Rules

Environmentalists are redoubling their efforts to pressure EPA to strictly regulate coal ash, citing EPA's 2010 draft risk assessment suggesting arsenic — a toxic contaminant found in coal ash — may be 17 times more carcinogenic than previously thought.

Representatives from the environmental group Earthjustice, along with community representatives from 10 states affected by coal ash, met with EPA waste chief Mathy Stanislaus on Nov. 4 to discuss the environmental impacts of coal ash and the agency's pending rulemaking relative to the substance.

During the meeting, Michael Kosnett, a medical toxicologist who has served on National Research Council and EPA Science Advisory Board (SAB) panels on arsenic, gave a presentation in which he contended that EPA's draft risk assessment on arsenic is a reason why EPA should strictly regulate coal ash, according to an environmentalist familiar with the meeting. One of environmentalists' primary concerns over coal ash is that it can lead to arsenic contamination of drinking water, an activist says.

EPA's draft Integrated Risk Information System (IRIS) review for arsenic, which the agency released in 2010, includes an estimate of cancer potency some 17 times stricter than EPA's existing arsenic risk number. The environmentalist says this increased risk requires that coal ash be more tightly controlled.

But EPA's draft IRIS review for arsenic has been controversial. In June 2010, SAB delayed completion of its review and complained that its subgroup charged with conducting the review was not thorough enough. The subgroup's report was generally positive but focused its review too narrowly, SAB officials said.

Industry officials also criticized the IRIS review, saying it was too strict and filing a Data Quality Act (DQA) challenge claiming that deficiencies in the study undermine its objectivity and validity.

Regarding coal ash, EPA has been taking comment on a notice of data availability that provides data for its rulemaking. The agency last year floated two options — either regulate coal ash as a "hazardous waste" subject to strict rules under the Resource Conservation & Recovery Act (RCRA) or as a "solid waste" subject to less-stringent RCRA requirements.

Many states, industry and Republicans favor the less stringent solid waste option, fearing that regulating coal ash as hazardous waste would harm the beneficial ash reuse industry. Environmentalists prefer the hazardous waste option, arguing it is needed to adequately guard against dangerous human exposure.

Meanwhile, in Congress, the House recently passed a bipartisan bill, H.R. 2273, that would preempt EPA's pending rule and instead allow states to craft their own non-hazardous regulations for coal ash. Although the White House stopped short of threatening to veto the bill, its companion, S.1751 appears unlikely to make it through the Senate.

Hot Documents Available on *InsideEPA.com*

Subscribers to *InsideEPA.com* have access to hundreds of policy documents, including draft regulations and legislation, as well as a searchable database of daily news stories and documents. The documents listed below are in addition to the background documents referenced throughout this issue. For more information about *Risk Policy Report*, or for a free trial, call 1-800-424-9068.

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EPA Defends GHG Risk Finding, Fights Legal Bid To Cite Critical IG Report

EPA is defending in federal appeals court its scientific finding that greenhouse gases (GHGs) endanger public health and welfare — in a suit that could determine the fate of EPA’s climate rules — while urging the court to reject recent filings citing an Inspector General (IG) report outlining flaws in the finding’s peer review process.

In a Nov. 10 brief filed with the U.S. Court of Appeals for the District of Columbia Circuit, the agency said its climate risk finding was required following the Supreme Court’s ruling in *Massachusetts v. EPA* in 2007 that found EPA can regulate GHGs under the Clean Air Act. The agency describes as scientifically sound its finding, which EPA has used to justify issuing its vehicle GHG rules, stationary source GHG permitting rules, and other policies. *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2382043)*

The DC Circuit is slated to hear oral arguments over the endangerment finding and a related suit challenging the “tailoring” permitting rules Feb. 28-29. If industry and other litigants succeed in having the court scrap the risk finding, it could imperil the climate rules, given that the regulations rely in large part on the finding’s conclusions.

EPA in its new brief says the high court required the agency to determine whether GHGs endanger public health or welfare. The air law says an affirmative finding requires EPA to issue rules to curb those risks.

EPA defends its conclusions in the endangerment finding — and in its denial of administrative petitions asking the agency to reconsider the finding — as “fully consistent with the statute and are well-supported, if not compelled, by the scientific information in the extensive administrative record compiled by EPA. Indeed, many of the arguments petitioners present in this case are similar to those the Supreme Court rejected in *Massachusetts*.”

For example, the high court said that “‘residual uncertainty’ about the science of climate change is ‘irrelevant’ to EPA’s inquiry; only ‘scientific uncertainty . . . so profound’ . . . could justify a decision not to regulate,” the agency’s brief says, adding that in finalizing the rule in December 2009, the administrator determined that GHG concentrations in the atmosphere “may reasonably be anticipated to endanger public health and welfare,” EPA says.

In addition to rejecting concerns over the finding’s science, EPA also accuses petitioners of seeking to enforce changes to the endangerment finding process that are “wholly (and unjustifiably) re-engineered to fit petitioners’ notion of rational decisionmaking, all the while ignoring that their preferred approach is completely at odds with congressional intent. They also pay scant attention to the actual, articulated basis for EPA’s scientific findings.”

EPA notes the 10 petitions for administrative reconsideration raised two primary categories of objection — the validity of certain temperature data as well as information released during the “Climategate” scandal where damaging emails from the Climate Research Unit at the University of East Anglia were made public. EPA said in its filing that the emails did not show “evidence of scientific misconduct or intentional data manipulation.”

However, Texas and Virginia in their Nov. 10 filing continue to argue that the leaked emails and other new information that arose after the public comment period on the endangerment finding closed “were sufficiently damaging to the data upon which the EPA relied” and warranted reconsideration, due to alleged flaws in EPA’s climate science. — *Dawn Reeves*

EPA Defends Equity Screening Plan After GAO Call For Clearer Strategy

EPA is strongly defending its work to elevate the role of environmental justice considerations in agency decisions and the use of a screening program to identify equity communities, following a Government Accountability Office (GAO) report that lauds EPA’s equity efforts but calls for a clearer, more structured strategy.

Rep. Donna Edwards (D-MD), who requested the GAO report released Nov. 7, issued a statement praising the agency’s progress while encouraging EPA to implement the recommendations. Edwards said the screening tool, known as EJ SCREEN, is not a substitute for a more comprehensive agency-wide equity plan.

The GAO report, “Environmental Justice: EPA Needs to Take Additional Actions to Help Ensure Effective Implementation,” generally praises efforts by Administrator Lisa Jackson to renew the agency’s commitment to environmental justice (EJ) after a decade of limbo, including developing “Plan EJ 2014” — a four-year plan finalized this fall to help the agency develop stronger relationships with communities, and boost efforts to improve the environment and public health in overburdened areas — and its related implementation plans.

However, GAO faults EPA for not establishing “a clear strategy for how it will define key environmental justice terms,” particularly by limiting itself to the EJ SCREEN computer program it plans to use to define a nationally consistent strategy. EPA uses the program to identify areas with potential equity concerns.

GAO says agency officials responsible for developing EJ SCREEN “repeatedly cautioned us that this tool would have very limited capabilities and would need to be supplemented with additional information in order to adequately identify such communities. While agency officials informed us that EJ SCREEN will ultimately contain some definitions for environmental justice terms, these definitions will be limited to the screening tool’s use and would not have agency-wide application. Absent definitions of key environmental justice terms that have agency-wide application, integration efforts are likely to be inconsistent across EPA’s program and regional offices.”

EPA failed to identify “the resources it may need to carry out its environmental justice implementation plans,” nor

has it “articulated clearly states’ roles in ongoing planning and environmental justice integration efforts,” GAO says. The agency also has not “developed performance measures for eight of its nine implementation plans” to track progress of Plan EJ 2014, GAO says. *The report is available on InsideEPA.com. See page 2 for details. (Doc ID: 2381673)*

Edwards, in her statement, pressed EPA on this. “If the agency wants all elements of its national structure to incorporate environmental justice values into the agency’s work, there needs to be foundational definitions to guide employees. A computer program such as EJ SCREEN will only be as useful as the definitions and categories that are fed into the software. It is not a substitute for a rich articulation of what needs to be considered,” she said.

But EPA in its response contained in the report defends EJ SCREEN. “We agree with the GAO regarding the need for greater consistency in how overburdened communities are identified. However, there is more than one way to achieve this goal. Our approach is to continue to develop a nationally consistent EJ screening tool.”

EPA also rejected GAO’s recommendation to conduct a resource assessment for implementing Plan EJ14, noting such an assessment is unnecessary because “Environmental justice is the responsibility of every program and region and this is reflected in the leadership.”

Additionally, GAO in recommending that EPA more directly involve states notes that without such outreach the agency’s effort may be hampered “given the significant role that states have in administering some environmental programs” under delegated authority to implement EPA rules.

EPA in response says it will continue to reach out to states but expects their involvement “will vary by the nature of the work outlined in each implementation plan.” For example, EPA says it “has already engaged states in our EJ in permitting work where we envision a significant state role. State involvement in other implementation plans, e.g., science tools development, may not be as significant.”

Edwards requested the report while serving as ranking member of the House Science, Space & Technology Committee’s investigations panel, but has since left that position to serve as ranking member of the technology subcommittee, a committee spokeswoman says, adding that Edwards has no plans to follow up on the GAO report.

Rep. Paul Tonko (D-NY) replaced Edwards as the ranking member of the investigations subcommittee. The spokeswoman says he has yet to look at the GAO findings.

Meanwhile, the federal Interagency Working Group on Environmental Justice has released for public comment equity strategies from other agencies that are part of an August memorandum of understanding (MOU) on equity issues. However, many other agencies are seeking comment on old strategies.

For example, the Department of Defense’s strategy is dated March 24, 1995, and the Department of Justice released its undated strategy from the mid-1990s, but noted it has been “carefully re-evaluated” it in light of the MOU and believes it continues “to fully reflect the goals and commitments of the” department.

Agencies releasing new strategies include the Department of Housing & Urban Development (HUD), which is accepting comment through Nov. 23 on its four-year plan released Sept. 30 to “increase access to environmental benefits through HUD policies, programs and activities.”

Additionally, the Department of Health & Human Services says its strategy released Oct. 4 “introduces the vision of ‘a nation that equitably promotes healthy community environments and protects the health of all people.’”

The Department of Transportation (DOT) is accepting comment through Nov. 30 on its updated EJ strategy it says reflects its “continued commitment to embracing the objectives of EJ. DOT will do so through enforcement of all applicable planning and environmental regulations and legislation, and through promoting nondiscrimination in programs, policies and activities that affect human health and the environment.”

And the Department of Commerce is seeking comment through Nov. 30 on its new strategy, which outlines agency-wide efforts to consider “any potential disproportionate and adverse environmental or health effects on low-income or minority populations” during National Environmental Policy Act reviews. It also says the department will seek to “remedy past environmental injustices or prevent future environmental justice issues from occurring.”

Agencies that have signed onto the MOU but have yet to release strategies include the Department of Agriculture, Department of Labor, Department of Veterans Affairs and Small Business Administration. — Dawn Reeves

Manufacturing Caucus Seeks NAS Study Of Styrene Following Cancer Listing

The bipartisan House Manufacturing Caucus is urging the Obama administration to initiate a National Academy of Sciences (NAS) review of the “potential health effects” of the widely-used industrial chemical styrene, after the National Toxicology Program (NTP) listed the substance as “reasonably anticipated to be a human carcinogen.”

While it is not clear if the administration plans to seek an NAS panel, any NAS review could influence a long-pending EPA assessment of the risks posed by the ubiquitous chemical. EPA’s last assessment of styrene, issued in 1993, said the agency lacked sufficient data to make a determination on the chemical’s carcinogenicity — though industry sources have said the agency is now crafting a cancer assessment (*Risk Policy Report*, July 12).

The House caucus, led by Reps. Donald Manzullo (R-IL) and Tim Ryan (D-OH), sent a Nov. 8 letter to White House Chief of Staff William Daley asking the administration to contract with NAS for a study of styrene after NTP’s classifica-

tion appeared in its most recent Report on Carcinogens (RoC).

“Our request for an NAS study is driven by the conflict of authorities both within and outside of the federal government regarding the health effects of styrene and public confusion that has occurred as a result of the listing June 10th of styrene as a ‘reasonably anticipated to be a human carcinogen’ in the 12th edition of the [RoC],” the representatives write. *The letter is available on InsideEPA.com. See page 2 for details. (Doc ID: 2382189)*

Twelve Democrats joined 38 Republicans in signing the letter.

At issue is the RoC, a congressionally mandated biennial report published by NTP, which is housed within the National Institutes of Health and the Department of Health and Human Services (HHS). Each report lists chemicals and environmental substances deemed to be carcinogenic or reasonably believed to be carcinogenic. The most recent report is the first RoC to list styrene as potential human carcinogen.

But the NTP finding has prompted criticism from industry and others, who charge there is little scientific basis for such a finding and warn that it will have harmful regulatory effects, including stymieing development of pollution control technologies.

An industry group, the Styrene Information and Research Center (SIRC), sued NTP over the RoC listing of styrene, though the court hearing the suit has conditionally rejected the group’s effort to block officials from listing styrene as a potential carcinogen.

Now the House caucus is echoing the industry concerns, telling the administration that “a definitive styrene carcinogenicity assessment from the respected and independent [NAS] would go a long way towards settling the scientific controversy and allow the Administration to base its regulatory decisions and hazard identification on the best available information.”

“HHS staffers must have known that the latest science did not support their conclusions about styrene’s health effects — and yet HHS insisted on issuing a ruling with the potential to alarm and confuse workers at hundreds of large and small manufacturing operations and their plant neighbors, with no public health benefit whatsoever,” Tom Dobbins, the chief staff executive of the American Composites Manufacturers Association (ACMA), and Jack Snyder, executive director of the SIRC, said in a joint Nov. 9 statement on the caucus’s letter.

The ACMA and SIRC statement argues that the RoC listing puts at jeopardy some 750,000 jobs at companies that manufacture a slew of products using styrene, ranging from bathtubs to pollution control equipment. They argue the chemical “has been used safely for 60 years” in related industries.

In addition to seeking a panel review, SIRC is also suing over the study. While Judge Reggie Walton of the U.S. District Court for the District of Columbia recently rejected the industry motion to block the NTP listing, he also left the door open to additional briefing on the issue. Walton granted SIRC’s July 1 motion for leave to file supplemental declarations in support of their motion for preliminary injunction.

And last month Walton granted SIRC’s October 4 motion to stay the briefing schedule until he rules on SIRC’s motion for HHS to complete the record.

The parties now appear deadlocked over documents that industry requests but HHS argues aren’t required. Walton has scheduled a Dec. 1 hearing to determine what documents HHS must provide petitioners in the case regarding how it drafted the styrene listing. Walton also issued a Nov. 3 order requiring the attorneys and their clients to be civil. — *Maria Hegstad*

Faulting EPA Utility Air Toxics Rule Data, Inhofe Threatens IG Investigation

Sen. James Inhofe (R-OK) is threatening to request an EPA Inspector General (IG) investigation into EPA’s lack of peer review for data underpinning its pending utility air toxics rule and questioning whether EPA’s Dec. 16 legal deadline for the rule gives the agency adequate time to address its advisers’ recommendations for revising the data.

Inhofe, ranking member on the Environment & Public Works Committee, sent an Oct. 31 letter to EPA Administrator Lisa Jackson saying the agency’s lack of peer review for its utility air toxics rule undermines it. In particular, the senator attacks a risk assessment EPA conducted to inform its finding that it is “appropriate and necessary” to issue a maximum achievable control technology (MACT) standard for power plants. *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2380926)*

The senator’s concerns echo to some extent criticisms by the Utility Air Regulatory Group and others who warn that EPA’s proposed version of the utility MACT released March 16 contains major data flaws. Elements within industry want EPA to pull the rule and delay its issuance until late 2012, a suggestion that some House Republicans appeared to back at a Nov. 1 House Oversight & Government Reform Committee hearing on the upcoming air toxics rule.

Inhofe in his letter does not explicitly ask EPA to delay the rule, though he does ask for a reply to several questions over the data by Nov. 15 — one month before the deadline for issuing the rule. He says the agency is “largely non-responsive to requests for information” and warns he will take “all means necessary” to get answers to his utility MACT questions, including requesting an EPA IG investigation into the matter if EPA does not respond.

The senator references a recently released IG report that found EPA failed to meet all White House requirements for

peer review of its finding that greenhouse gases endanger health and welfare. The report says it appears the agency has “cut corners” on the utility MACT review, in addition to the climate endangerment finding review.

Among the senator’s questions are whether the agency has sufficient time ahead of its Dec. 16 consent decree deadline to address concerns over the data raised by the agency’s Science Advisory Board (SAB) and to ensure that the data meet EPA’s peer review guidelines and the Data Quality Act (DQA), which requires agencies to ensure that scientific and other data used to develop policies are objective, reproducible and peer-reviewed.

Inhofe faults EPA’s process for review of its risk assessment of mercury as a hazardous air pollutant (HAP) for the “appropriate and necessary” finding, a key legal and scientific justification for proceeding with the MACT, and a related document on case studies for non-mercury HAP emissions from coal- and oil-fired power plants. EPA’s argument is that the data on power plants’ HAP emissions meet Clean Air Act requirements for issuing a MACT.

EPA sent the appropriate and necessary finding for White House Office of Management and Budget (OMB) review Oct. 24 but is yet to send the final MACT standard regulatory text for OMB review — a vital step before EPA can release it.

Even though the finding is under White House review, Inhofe in the letter criticizes the agency’s peer review of the mercury risk assessment and HAP case studies as “inadequate, and even non-existent.”

According to the letter, “EPA’s failure to properly accredit the risk analysis underlying the Utility MACT, at best, runs afoul of both OMB and EPA requirements under the DQA. In fact, EPA’s improper ‘peer review’ of these critical studies threatens to undermine the basis on which EPA claims that Utility MACT regulations are ‘necessary and appropriate’ under the Clean Air Act. Without further scientific backing, EPA apparently expects the courts to simply take the Agency’s word that the regulations are ‘necessary and appropriate,’” an apparent reference to expected litigation from industry and other utility MACT critics once the agency releases the final rule.

An SAB panel that reviewed EPA’s assessment of the risk of utility mercury emissions from power plants urged the agency to bolster substantial aspects of its document describing the agency’s risk assessment of power plant mercury emissions, while maintaining its support for EPA’s overall approach as “scientifically credible.” — *Bobby McMahon*

EPA Crafting New Study On ‘Economic Importance’ Of Clean Water

EPA’s water office is crafting a new study on “the importance of clean water to the U.S. economy,” which could help the agency justify a number of key water initiatives under the Clean Water Act (CWA), including a controversial new rulemaking intended to clarify when isolated wetlands and other marginal waters are subject to regulation.

In a *Federal Register* notice published Nov. 14, EPA’s Science Advisory Board (SAB) says it is planning a Dec. 5 teleconference to solicit early advice from its Environmental Economics Advisory Committee on the new study’s scope, planning and development. *The notice is available on InsideEPA.com. See page 2 for details. (Doc. ID: 2382105)*

The effort appears likely to extend and formalize ongoing efforts by agency officials to quantify the economic benefits of clean water to help justify regulatory efforts. For example, EPA Administrator Lisa Jackson recently noted the significant costs to fishing, tourism and other industries posed by water contamination from the Gulf of Mexico oil spill.

“We had to hit pause on a billion-dollar seafood industry and saw a drastic slowdown in tourism dollars,” Jackson told the Milwaukee Water Summit Sept. 20. “There was a great cost in losing that economic activity, even for just a short period of time. But it was nothing compared to what would happen if we lose those waters for good.”

“It is hard to overstate the value of clean water — and clean water innovation — to our economy,” Jackson added.

Agency officials have also argued that measures to clamp down on nutrient pollution could provide substantial drinking water benefits, as would their efforts to clarify the scope of the CWA since it would protect waters that are essential to providing safe drinking water.

According to the draft notice, EPA’s Office of Water requested that SAB provide “a consultation on the data, information and analytical methodology to evaluate the value of water to the U.S. economy and provide a resource for future decision-making.”

Those decisions could include efforts to regulate under the CWA. “EPA anticipates this effort, when combined with EPA research on the value of water in the United States from non-market values (e.g., non-use values, recreation, etc.), will integrate market and non-market economic value information that is critical to support decision-making at multiple scales (e.g., EPA, state, regional, watershed, or local),” the notice says.

EPA says it is seeking advice from SAB on topics including “how the availability of clean water may affect patterns of economic development, advantages clean water may provide to different sectors of the economy (i.e., tourism, farming and food production, fishing, manufacturing, infrastructure, housing and energy), and what data are available or needed to support strategic choices,” the notice says.

The Dec. 5 meeting will include an opportunity for public comment, the draft notice says.

Democrats Call For Hearings Into New Study Of Industrial Pollution's Costs

House Democrats are calling on the Energy & Commerce Committee to hold hearings on new economic research showing that the costs of air pollution from power plants and other industrial facilities outweigh the overall value that they generate, which they say could bolster the case for EPA regulations and stymie legislation to block the rules.

Reps. Henry Waxman (D-CA) and Bobby Rush (D-IL) on Nov. 10 sent a letter to the GOP leadership of the energy committee asking for a hearing on a study on the economics of pollution, *Environmental Accounting for Pollution in the United States Economy*, which was written by economists at Yale University and Middlebury College. *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2381864)*

The economists calculated that for several industries — solid waste combustion, sewage treatment, stone quarrying, marinas and oil- and coal-fired power plants — the health and other damages that result from their emissions exceeds their economic value. “The largest industrial contributor to external costs is coal-fired electric generation, whose damages range from 0.8 to 5.6 times value added,” the study concludes.

The lawmakers say the study concludes that a reduction in emissions from the facilities would reduce the public health costs of the facilities, bolstering the case for stronger environmental protections.

“Instead of strengthening our national well-being by reducing pollution from these industrial sources, our Committee has been doing the exact opposite,” the letter says. “We have reported — and the House has passed — a series of bills that loosen environmental regulations for many of the industrial sectors identified in the study,” citing a number of House bills that delay or prohibit EPA from moving ahead on air and other rules.

The study backs arguments made by Democrats, as well as EPA Administrator Lisa Jackson, that EPA regulations are not responsible for the current economic crisis.

Similarly, Nobel economist and *New York Times* columnist Paul Krugman wrote in a Sept. 30 blog post, that the research should be a “major factor” in the discussion of economic policy. Krugman says that externalities like air pollution are a “classic” market failure that should be addressed via taxes or permits, arguing that Republicans are not seriously attempting to address the failures.

“Today’s American right doesn’t believe in externalities, or correcting market failures; it believes that there are no market failures, that capitalism unregulated is always right,” Krugman writes in his blog. “Faced with evidence that market prices are in fact wrong, they simply attack the science.”

EPA Considers New Approaches To Estimating RfCs . . . begins on page one

“Our default approaches give you a . . . [risk estimate], that is a little bit lower, may result in a concentration that is less than that estimated by these more sophisticated models. And that’s very much what you’d kind of expect. With this additional knowledge we’re reducing some of those uncertainties,” says an agency source familiar with the effort.

Specifically, EPA is reviewing its method for setting reference concentrations (RfC), which measures the amount of an environmental gas at or below which EPA estimates a person can inhale daily over a lifetime without experiencing adverse noncancer health effects. RfCs are one type of risk value the agency often includes in its IRIS assessments.

The agency’s existing guidance for how these risk estimates should be estimated, *Methods for Derivation of Inhalation Reference Concentrations and Applications of Inhalation Dosimetry*, and referred to as *RfC Methods*, was published in 1994.

But the agency is in the midst of a multi-year process reviewing approaches for modeling inhalation dosimetry of environmental gases in the respiratory system.

EPA in late September published the second of two reviews of updates to the field, “Advances in Inhalation Dosimetry for Gases with Lower Respiratory Tract and Systemic Effects.” The paper indicates that newer approaches may lead to less stringent inhalation risk estimates than those produced by existing default methods. *The review is available on InsideEPA.com. See page 2 for details. (Doc ID: 2382182)*

The paper concludes that its “results give indications the current dosimetry approach of *RfC Methods* that uses ratios of animal to human [blood:air or blood:gas partition coefficient] as a basis of dosimetry for the extrapulmonary region may result in human equivalent concentrations that are less than estimated by PBPK [physiologically based pharmacokinetic] models.”

PBPK models are used to estimate how a chemical moves through the body. They are intended to provide a more sophisticated way to compare the results of chemical exposure to lab animals with the what would be expected if humans were similarly exposed.

The first paper in the series, published in 2009, focused on advances in inhalation dosimetry for the upper respiratory tract.

The agency source describes the most recent document as “a fundamental science report that we’ll be getting into later as we evaluate our [RfC] methodologies during this fiscal year.”

“We’re going to be looking into the RfC methodology and taking this report plus other reports, the status 1 report done in

2009 that deals with the upper respiratory tract . . . this is the complement to that,” the agency source says. “Those two together serve as the science foundation for taking a look at our methodologies. We’re just really getting going on that.”

The most recent paper explains that “the goal of this project is to provide information necessary for ensuring that methods and guidance used and implemented by EPA in inhalation risk assessment reflects the state-of-the-science.” The paper adds that the methods it reviews “are used predominately for interspecies extrapolation, typically from laboratory animal inhalation exposures to humans,” which are necessary when assessments are based — as they often are — on toxicological studies of how laboratory animals respond to chemical exposures.

The source explains that the agency’s current approach uses the ratios of animal to human blood to gas as the basis for dose adjustments between animals and humans for certain areas of the respiratory tract called the extrapulmonary region. “In those areas, the default approach may result in concentrations that are less — a little bit lower — than those that are estimated by a more sophisticated approaches like these PBPK models we talked about,” the source says.

The source explains that this may result in less stringent RfCs than those estimated from the default ratio approach recommended in the agency’s current *RfC Methods*.

“With more information, more sophisticated models, there is somewhat less uncertainty. So the resulting RfC may be higher if you use a PBPK model than if you use our default approach,” the source adds. “That’s what the state of the science is pointing to.”

The most recent paper also reflects Administrator Lisa Jackson’s emphasis on examining children’s health risks, including a review of the available children’s dosimetry studies. The paper “evaluates new data and approaches for inhalation dosimetry of gases in children. This area was included in recognition of the Agency’s commitment to ensuring that EPA actions are protective of children, given the potential for sensitivity of early lifestages to some environmental exposures.”

But the authors concluded that there is insufficient children-specific data or models to create a standard methodology for estimating children-specific inhalation risks — unless there is sufficient data specific to the chemical under assessment. The paper concludes, “Consequently, with regards to gas dosimetry, there appears to be insufficient quantitative evidence to modify the *RfC Methods* specifically for children; however, in some cases, chemical-specific information may warrant consideration of alternative approaches or adjustments to account for this lifestage.”

A children’s health expert at EPA did not disagree. “My hope is that there will be more data or different analyses of the same data that will break through that conclusion,” the source says. “This is often a dilemma we have with children’s health. There is not enough data to make a hard push for it. It opens up the realm of policy.”

The agency’s most recent paper describes “a compelling dataset” indicating the “generally slower clearance rate” in children of administered therapeutic drugs. The paper continues, “Although the actual number of datasets and models relating to gas dosimetry in children is not yet plentiful, a number of methods and approaches are available. These methods and approaches indicate child vulnerability related to inhalation dosimetry is typically in the range of 1 to 2-fold more than adult, but can be more or less.”

Due to this limited data, EPA’s existing RfC guidance considers one of its uncertainty factors (UFs) to cover the differences between children’s and adults’ inhalation dosimetry, the second agency source says. EPA multiplies its risk estimates by UFs to create its RfC and their comparative ingestion risk estimates, reference doses. These factors, applied for reasons such as limited data, biological differences between humans and lab animals or variety in the human population, make risk calculations more conservative with a goal of being health protective in the face of uncertainty in the estimates.

The paper explains that EPA’s existing RfC guide “currently considers children within the intraspecies variability uncertainty factor intended to account for intrahuman variability in response among sensitive populations and lifestages within the population but devotes no further analysis to the matter.”

In this case, the UF for human intraspecies variability is intended to address the differences between adults’ and children’s toxicokinetics and toxicodynamics, the second agency source says. Toxicokinetics refer to the distribution of the chemical under assessment in the body, how it is metabolized. Toxicodynamics refer to how the toxicant interacts with tissues in the body. — *Maria Hegstad*

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Wyoming Contamination Case May Be Fracking-Related . . . begins on page one

available on *InsideEPA.com*. See page 2 for details. (Doc ID: 2382045)

The study also appears to rule out agricultural chemicals as a potential source of contamination.

The agency's Office of Research and Development (ORD) plans to release later this month a draft report on the findings that will be subject to public comment and a formal peer review.

EPA did not comment at the Nov. 9 meeting on the cause of the contamination, according to press reports. "Our scientists are continuing to complete their analysis of those data and we are working hard to complete a report interpreting the findings in the near future," an EPA spokesman told the *Billings Gazette*.

While the agency's findings are still preliminary, they could provide one of the first cases of fracking contaminating underground sources of drinking water — which would likely intensify calls from environmentalists and some Democrats for Congress to repeal a controversial legislative waiver that generally bars EPA from permitting fracking injection under the Safe Drinking Water Act (SDWA).

The process injects fluids containing a variety of chemicals, sand and other substances to release natural gas and oil from shale and other geologic formations that were previously difficult to exploit. It has resulted in vast new natural gas supplies coming to market, prompting optimism that it could become a cleaner-burning generation alternative than coal.

But environmentalists and others are concerned that it is not adequately regulated, in part because language inserted into the 2005 energy law exempted the fracking injection process from SDWA regulation. But Democratic legislation in the House and Senate that would repeal the exemption and require full disclosure of chemicals used in fracking injection has failed to move this Congress.

Industry groups and other proponents say EPA regulation is not necessary because the fracking injections travel so far below drinking water aquifers, upward migration of fracking chemicals through such a considerable volume of rock is highly unlikely to occur.

While methane contamination has been linked to natural gas production activities in other parts of the country through wells leaks, faulty cement jobs and flawed well casings, industry frequently argues, and agency officials have conceded, that EPA has been unable to link injection to a single case of drinking water contamination to the actual fracking process.

EPA first raised concerns about adverse changes to Pavillion's drinking water supply in 2008 after residents began complaining of unpleasant odors in their drinking water.

After discussion with Wyoming Department of Environmental Quality (WDEQ), the agency sampled water wells to assess the cause of the methane gas found in the drinking water. The agency also installed deeper monitoring wells to evaluate the composition of water deeper in the aquifer, in the hopes of determining whether nearby natural gas exploration and production activities by Encana, a Canadian natural gas company, are linked to the contamination.

Meanwhile, the Agency for Toxic Substances and Disease Registry listed gas drilling, along with agricultural activities, as a potential cause of the Pavillion contamination, but the new test results found no detectable levels of pesticide chemicals or nitrate in drinking water wells, which might point to agricultural-related pollution.

In all, EPA monitored a total of 42 private drinking water wells and four stock wells that showed the presence of diesel and gasoline range organics in amounts ranging between 10 to 100 parts per billion (ppb), including 2-butoxyethanol (2-BE) phosphate at nine of the sampled wells, and naphthalene, according to preliminary findings posted on EPA's website following the Nov. 9 meeting held in Wyoming.

Fracking operators sometimes use 2-BE, also known as ethylene glycol monobutyl ether, in their injection fluid to reduce surface friction, and EPA's 2010 Integrated Risk Information System (IRIS) assessment indicated that chronic human exposure through inhalation or ingestion can cause adverse liver effects and destruction of red blood cells.

Naphthalene, another component sometimes linked to fracking injections, is considered by EPA to be a possible human carcinogen, according to the 1998 IRIS assessment. The agency is re-assessing naphthalene's risks and estimates a late 2013 publication date, according to its IRIS Track website.

The drinking water samples also revealed levels of thermogenic methane, which is associated with the production process, in 10 of the wells at ranges between 10 to 800 ppb.

In the monitoring wells, which EPA drilled to assess conditions deeper in the aquifer, the sampling results indicated the presence of methane at "near saturation levels" up to 19 milligrams per Liter (mg/L), synthetic organics including 2-BE, and constituents of a high-profile class of toxic compounds known as the BTEX chemicals — benzene, toluene, ethylbenzene and xylene. Levels of benzene were found at 50 times EPA's allowable drinking water limit, or maximum contaminant level (MCL) of 0.005 mg/L, agency reports indicate. Toluene, ethylbenzene and xylenes were also found at levels ranging between 100 and 1000 micrograms per liter.

Democratic lawmakers and environmentalists have flagged BTEX compounds linked to use of diesel in fracking operations, as a major flashpoint in the debate on whether fracking is safe because a 2004 study found that levels of the compounds were found in fracking fluid in excess of drinking water limits.

When Congress narrowed EPA's regulatory authority in 2005, it preserved EPA authority to permit only those operations that use diesel fuels, which environmentalists and Democrats have said is because of the BTEX concerns. As

the agency works to implement its authority to permit diesel injection in fracking, officials have suggested they plan to adopt a definition of “diesel fuel” that will also capture fracking operations that use BTEX compounds.

The methane found in the deep wells is of an isotopic signature associated with gas being mined for production, and not that of biogenic methane.

According to EPA presentation slides, Encana, the company that drills near Pavillion, has begun voluntarily providing drinking water for residents whose water has been affected. The agency is still continuing to assess wellbore integrity at the Pavillion site and further analyze results of the deep monitoring well data and plans to release a final report in the spring after all relevant peer review and public comment has taken place.

Meanwhile, the Pavillion study could raise questions about the agency’s final plan for studying the effects of fracking on drinking water, a study that Congress requested in EPA’s 2010 spending bill.

According to the Nov. 3 study plan, the agency narrowed its focus on underground sources of drinking water while heightening its focus on surface spills. In the final plan, the agency rewrote its “fundamental research questions” aimed at examining the potential impacts associated with fracking during five stages of the water lifecycle to focus almost exclusively on impacts to drinking water from surface spills and wastewater discharges.

While the draft plan, issued last February, asked generally about “the possible impacts of releases of hydraulic fracturing fluids on drinking water resources,” which could include underground contamination, the final plan focuses on “the possible impacts of surface spills on or near well pads of hydraulic fracturing fluids on drinking water resources.”

The approach appears at odds with recommendations from the agency’s Science Advisory Board, which had urged EPA in its Aug. 4 letter to Administrator Lisa Jackson to consider addressing surface spills in its secondary research questions, in order to better focus the study on processes that could have high potential for human exposure. “The SAB concludes that given the constraints of time and funding, EPA should attempt to identify the fate of fracturing fluid components that are deemed to be of highest priority that are introduced with the injection,” the letter says. “It may be appropriate for EPA to expand the existing secondary questions to explicitly identify the need for identifying the likelihood of spills or releases and the effectiveness of mitigation practices.”

A state source said the changes “appear to be substantial” and could be an agency recognition that fracking processes are more likely to cause shallow impacts to drinking water through spills near the well pad than the upward migration of fluid from the fracking injection. “It does seem to be a rather significant narrowing of focus,” the source says. “Studying surface spills is a heck of a lot easier.”

An EPA spokeswoman did not return a request for comment regarding the changes to the final plan. — *Bridget DiCosmo*

DOE Panel Urges Agencies To Speed Oversight Of Fracking Risks

The Energy Department’s panel developing recommendations for limiting risks of hydraulic fracturing is urging EPA and other agencies to take swift action to implement its recommendations aimed at improving understanding of the risks associated with shale gas development, warning that such an approach is necessary to gain public confidence in energy production.

In a new report released Nov. 10, the Secretary of Energy Advisory Board (SEAB) panel says progress that federal agencies have made in adopting the advice outlined in its earlier report — which called for improved environmental monitoring of the industry and requiring disclosure of chemicals used in the fracking process — is “less than the Subcommittee had hoped.” *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2381817)*

“The Subcommittee cautions that whether its approach is followed or not, some concerted and sustained action is needed to avoid excessive environmental impacts of shale gas production and the consequent risk of public opposition to its continuation and expansion,” a press release issued alongside the draft report says.

The call for stepped-up regulation will almost certainly inflame the natural gas and other industries seeking to limit regulation of the booming sector.

The full SEAB panel approved the draft report during a Nov. 14 teleconference.

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Advisors Question Draft Microbial Risk Guide . . . begins on page one

associated with the gastrointestinal tract and fecal or oral transmission of the causal agents mainly in food and water, but clearly has application to other scenarios.” *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2382181)*

The draft document, released in July, is not intended to replace any existing microbial risk assessment guidance that an individual agency may have, but instead to complement it, according to the draft. The document explains that “In recognition of the needs and mandates of the participating Agencies and the various statutory authorities that may apply to [MRA], this Guideline emphasizes the need for a flexible template for conducting microbial risk assessment. It provides general, broad fundamental risk assessment principles specifically for microbial risks, but is not intended to be prescriptive nor is it intended to supplant the internal practices or policies of any Federal agency. Users have the flexibility to adapt pertinent sections to relevant statutory authorities and purposes if needed.”

The panel of experts reviewing the document generally praised the draft, with Gary Saylor, a microbiology professor at the University of Tennessee, saying he “really did like it” during the panel’s Nov. 7 meeting in Washington, DC. Another reviewer, Christine Moe, a professor of safe water at Emory University, praised the “great collaboration between agencies.”

And Mark LeChevallier, a panelist with American Water, expressed “a little disappointment [the document] kind of talks itself down, right at the beginning, [it says] it’s not guidelines. Anything you don’t like or contradicts” your agency’s policy can be ignored.

But the reviewers also raised concerns about the draft guide’s assumptions about how risk assessment would be performed, especially language that indicates MRAs’ “preferred” approach assumes there is no safe level of exposures to the microbes under assessment.

“One-hit (or no-threshold) dose-response models are generally the most relevant for microbial dose-response assessment. However, these models may not apply to all pathogens that cause illness by producing pre-formed toxins in food and they may be inappropriate for modeling illness and mortality,” the draft document states.

According to summary recommendations for EPA and USDA, which will be included in the report sent to the agencies working on the guidelines, the panel urges staff to “revisit the ‘one-hit’ model as a recommended default” in their recommendations.

These one-hit or linear, no-threshold risk models are often controversial in chemical risk assessments, because they assume that there is no safe level of exposure to the chemical at issue. By contrast, threshold, or non-linear modeling assumes that there is some level below which exposure is safe.

One of the reviewers, consultant Tony Cox Jr., raised the issue during panel discussion, and questioned the assumption that microbial risk assessments would be modeled with a linear model. “I don’t think all the data does support it by any means,” Cox asked. “Either defend it well or don’t assert it.”

A second panelist, Joseph Eisenberg, an epidemiology professor at the University of Michigan, agreed. “Though the document doesn’t have a lot of strong statements, this one is,” Eisenberg said. “I completely agree, it should be backed up.”

In comments written prior to the meeting, Cox explains that the draft guideline recommending the default “lacks citations. It is not clear when a threshold model is justified.” He adds that the section title “makes a presumption” that the one-hit model is preferred “that is not justified by the ensuing discussion.”

Two other reviewers also questioned the discussion of the linear model in their pre-meeting comments, including Saylor, who also noted that “in the discussion of dose-response modeling, the emphasis is almost exclusively non-threshold modeling approaches for a conceptual framework . . . as human microbiome studies continue to advance, evidence may one day be forthcoming the thresholds and perhaps even beneficial low dose exposures do exist.”

And the panel chairman, Darrell Donahue, a professor at the University of Maine, wrote in his pre-meeting comments, that it would be “useful to mention that thresholds, if they do exist, are likely host-dependent as well.”

Cox and other panelists are also urging the agencies to craft approaches that mitigate risks rather than setting firm risk limits. According the draft recommendations, the panel is urging the agencies to “consider risk reductions and mitigations, rather than acceptable-risk figures,” which are often the focus of quantitative chemical risk assessments.

The panel is also encouraging the agencies’ scientists to consider risk management options in terms of “bang for the buck.” The summary notes ask, “If you have limited resources to spend, where do you get the greatest risk reduction?”

The issue of conservative linear default models that assume no safe level of exposure is not a new one at EPA, or for Cox, who also served on the Science Advisory Board (SAB) panel that reviewed EPA’s draft risk assessment of dioxin.

In that case, Cox also recommended that EPA consider non-linear risk models to assess the carcinogenicity of dioxin, a ubiquitous contaminant that forms naturally and also during industrial processes. The issue has long been contentious, delaying EPA Integrated Risk Information System (IRIS) assessments of environmental chemicals such as arsenic, dioxin, hexavalent chromium, trichloroethylene and perchloroethylene (*Risk Policy Report*, July 20, 2010).

While a newer area of assessment, EPA and other federal agencies have struggled with how to develop guidelines for

performing MRAs for some time. An EPA framework for performing MRAs in water applications was in development for nearly 15 years before it was panned by an SAB panel in 2009. The document, which EPA called a protocol, was meant to be used for a number of applications, including future Safe Drinking Water Act and Clean Water Act regulations. But the advisers questioned the utility of the document and said it lacked the specificity to guide a risk assessment (*Risk Policy Report*, Sept. 29, 2009).

That earlier EPA document is now a glossary attached to the new interagency document, an agency source says. The new draft document focuses on both EPA's water application concerns and USDA's food safety inspection service. It does not mention the work of the Food and Drug Administration's Center for Food Safety and Applied Nutrition, which reviewer Donald Schaffner called "the other agency doing MRA." Schaffner, a food science professor at Rutgers, the State University of New Jersey, asked why FDA scientists were not among the document's authors.

Kerry Dearfield, a USDA scientist who co-chaired the authors' committee explained that FDA was asked to be involved at the beginning of drafting the document. "Their response was that they didn't have the resources to be involved," Dearfield said. "They did give us lots of technical comments." — *Maria Hegstad*

California Risk Guidelines May Trigger Tighter Rules . . . begins on page one

to hold public workshops on the guidelines in Los Angeles and Oakland.

OEHHA said it is required to develop guidelines for conducting health risk assessments for use under the state's Air Toxics Hot Spots Program. OEHHA previously drafted guidelines in 2000. OEHHA said the revised draft replaces the original technical support document and reflects new scientific knowledge developed since the previous guidelines were prepared. OEHHA has updated exposure parameters, including inhalation rate and food consumption rate, based on the most recent data, such as exposure factors for infants and children, according to the office. The new draft also updates an approach to assessing dermal exposure, OEHHA said. *A copy of the draft is available on InsideEPA.com. See page 2 for details. (Doc ID: 2381844)*

OEHHA is seeking comments on the revisions to the existing approved methodology for dermal exposure and revised exposure parameters. After the comment period, the document will undergo review by Cal/EPA's Scientific Review Panel on Toxic Air Contaminants, OEHHA said.

The Air Resources Board's toxics hot spots program, required under the 1987 law AB 2588, requires stationary sources of emissions to report the types and quantities of pollutants emitted. The goal of the program is to collect emission data, identify facilities with localized impacts, understand health risks, notify nearby residents of risks, and reduce significant risks to acceptable levels.

An environmentalist said the Bay Area air district recently delayed "a few issues" regarding implementation of its hot spots program to wait for the new OEHHA guidelines. Some residents in the Bay Area have been concerned about certain projects and their potential air pollution impacts, and the district "was waiting to see what to do [regarding] the pending OEHHA revision to the guidelines," the source said. "So the district delayed what to do on certain things."

The source noted that air districts usually base their facility control measures on the OEHHA risk assessment guidelines. The Bay Area district recently proposed revising its risk thresholds for facilities, but decided to shelve that rulemaking until OEHHA released the updated guidelines, the source said. It is possible the new OEHHA risk guidelines could force the district to recalculate its thresholds, which "could change which facilities fall above or below a certain threshold."

An industry source said the Bay Area district is the "furthest along" in terms of potentially implementing the new OEHHA guidelines and has "raised the issue" at stakeholder work groups in the past.

The district late last year indicated to environmentalists that OEHHA's expected completion of the revised guidelines was delayed longer than expected, sources said.

The district had floated a proposed rule to update its thresholds for facility toxic air contaminant risk reduction under the hot spots program, according to sources. The district alerted stakeholders that under the proposal, the types of businesses affected need to be identified along with the range of compliance costs, and the impact on the economy.

District officials indicated that the new rule could potentially impact thousands of district facilities, including many small businesses. This would be the case if risk methodologies changed to increase cancer risk estimates by a factor of 2 to 3, and if the cancer risk reduction threshold was changed from 100-in-a-million to 10-in-a-million, the district told stakeholders last year.

Some of the facilities or emission sources impacted may include gas stations, stationary diesel backup generators, and chrome platers, the district said. District officials last year said they intended on developing the new hot spots risk reduction rule concurrently with OEHHA's changes in risk assessment methodology.

A Bay Area air district source said it is too early to say how the new guidelines will affect its risk estimates. Risk

assessments may be different for different facilities depending on the pollutants emitted, the district source said.

The source noted that the new OEHHA document and revisions to cancer risk assessment introduce the use of age sensitivity factors, which significantly increase estimates of lifetime cancer risk by a factor of about 1.7. “We will have to study the proposed revisions to the exposure assessment [document] to see what the net effect will be. Overall, we expect the most recent round of OEHHA revisions to result in higher risk numbers — representing a “tightening” if risk action levels used in regulatory programs are not changed.”

The district source emphasized that the new document is a proposal and will need to be finalized by OEHHA for use in the hot spots program. “We will therefore need to wait until this happens to see how the final version will come out,” the source said. “We can then assess how this will affect risk estimates for facilities — something that is needed for us to move forward with a hot spots-related rulemaking.”

Activists Fear Repercussions Of Fukushima . . . begins on page 14

PAG that is silent on those two issues would have a similar effect, the activist says.

A lack of a clear policy on the issues is already causing EPA to act as if the Bush-era draft PAG is already in effect, the environmentalists argue. For example, EPA has stated that, despite detecting levels of radioactivity in U.S. milk and rainwater above the MCLs since the onset of the Fukushima nuclear crisis in Japan, the findings are below “any level of concern.”

For this reason, activists say they are alarmed by international pressure on Japan to utilize the optimization approach in its Fukushima cleanup. In addition to the ICRP recommendations, the International Atomic Energy Agency (IAEA) in an October report urges Japan to use optimization and less stringent guidelines than it normally would.

For example, “[w]ith respect to the remediation of agricultural areas, [IAEA] considers that for the next cropping season there is room for removing some of the conservatism (such as that in factors determining the transfer of radioactive caesium from soil to crops),” the report says.

In addition, the report suggests that “[w]ith respect to waste in urban areas, [IAEA] is of the opinion that it is obvious that most of the material contains very low levels of radioactivity.”

But Japanese and international officials are downplaying the significance of such urban contamination, the activist says, and are responding to it in way that it is inconsistent with how EPA’s Superfund program normally would in the U.S. Given the current controversy of post-emergency cleanup guidelines in the U.S., environmentalists fear the Japanese actions could establish a precedent that could impact domestic policy, the activist says.

For example, in response to claims by Japanese civilians that testing had revealed hotspots of radioactive cesium in Tokyo soil, Kaoru Noguchi, head of Tokyo’s health and safety section, was quoted in *The New York Times* as saying that such contamination is insignificant because most of it likely fell on concrete, rather than soil, and washed away.

“Nobody stands in one spot all day,” Noguchi told the paper. “And nobody eats dirt.”

The activist says Noguchi’s statements are inconsistent with the Superfund cleanup approach and what is known about radioactive cesium. For example, cesium is known to bind to concrete if not quickly removed, the activist says. In addition, while Noguchi asserts that “nobody eats dirt,” EPA’s Superfund program routinely includes soil ingestion as an exposure pathway when assessing contaminated sites due to fears that children ingest soil when playing outside, the activist notes. — *Douglas P. Guarino*

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Activists Fear Japan's Nuclear Cleanup Levels Could Undermine EPA Policies

Environmentalists fear that controversial radiation exposure limits the Japanese government is using to set cleanup goals for areas contaminated by the Fukushima nuclear power plant disaster could set an international precedent that could undermine EPA's Superfund cleanup levels and their efforts to strengthen EPA's draft nuclear emergency guide.

Kazuo Sakai, of Japan's National Institute of Radiological Sciences, said at an International Commission on Radiological Protection (ICRP) conference in Rockville, MD, Oct. 26 that Japanese officials are following ICRP recommendations that they employ a controversial cleanup approach known as "optimization" and establish cleanup goals meant to prevent radiation doses of between 1 and 20 millisivert per year (mSv/yr).

Environmentalists in the U.S. are highly critical of this dose range, saying it is equivalent to between 100 and 2,000 millirem per year (mrem/yr). The activists say that a 2,000 mrem/yr dose would cause a cancer risk to about 1 in 500 people, significantly higher than the worst-case 1 in 10,000 cancer risk that EPA's Superfund program permits when cleaning up a site.

Activists are particularly concerned about an endorsement of optimization because EPA adopted it as a cleanup approach for nuclear emergencies in a Bush-era draft revision to the agency's protective action guide (PAG) for radiological incidents. The activists feared the draft guide could cause an erosion of the agency's long-held Superfund cleanup standards.

Earlier this year, the Obama EPA floated a revised draft PAG to other federal agencies that omitted explicit references to optimization, noting that federal and state cleanup programs — such as EPA's under Superfund — already exist, and that providing separate cleanup guidance is outside the scope of the PAG, which otherwise focuses on dealing with the more immediate aftermath of such an accident.

But since then environmentalists have raised fears that there is an effort within the federal government to weaken the Obama-era draft, which is currently undergoing review at the White House Office of Management & Budget (OMB). For example, according to an internal June memo, NRC staff are lobbying OMB to delete references to Superfund and EPA drinking water standards (*Risk Policy Report*, Sept. 20).

Environmental groups — including the Natural Resources Defense Council, Sierra Club and Committee to Bridge the Gap — raised these concerns to top EPA officials during an Oct. 31 meeting at the agency's headquarters in Washington, DC, and according to one activist, the groups remain concerned after the meeting. *Relevant documents are available on InsideEPA.com. See page 2 for details. (Doc ID: 2382025)*

The EPA officials, including Deputy Administrator Robert Perciasepe and Assistant Administrators Gina McCarthy, Mathy Stanislaus and Nancy Stoner, gave "no clear indication at all" that the environmentalists' concerns would be addressed, the activist said.

Even if the PAG is not finalized with endorsements of optimization or relaxed drinking water guidelines, environmentalists are concerned that, if the document does not explicitly endorse Superfund and the EPA's enforceable maximum contaminant levels (MCLs) for drinking water, the door will be left open to circumvent those regulations, the activist says.

For example, if no new PAG is finalized at all, EPA will be left with the current document it published in 1992, which is silent on specific drinking water guidelines and long-term cleanup, potentially giving proponents of optimization and lax drinking water guidelines an opportunity to advocate for them in specific instances, the activist says. Publishing a new

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