April 5, 2010

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Robert Perciasepe
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Re: Protective Action Guidance for Radiological Releases

Dear Administrator Jackson and Deputy Administrator Perciasepe:

On his last full day in office in January 2009, outgoing Acting EPA Administrator Marcus Peacock approved sending controversial proposed revised Protective Action Guidance (PAGs) for responding to radiological releases to the Federal Register for publication. The proposed PAGs would dramatically increase permissible concentrations of radionuclides in drinking water and allow extremely high long-term radioactive exposure levels that would not require cleanup.

A few days after the Obama Inauguration, the new Administration pulled the PAGs back from the Federal Register before they were published and ordered a review by the new EPA leadership. Since the final decision as to what to do with the PAGs drafted in the last Administration will rest with you, we think it important to provide you with some key documents demonstrating the deep division that existed within EPA over these proposals and the serious technical concerns about them which may not have been permitted to make their way up the decision-making chain. We do this because the documents we have finally obtained—after great resistance by the Office of Radiation and Indoor Air (ORIA), the primary proponent of the revised PAGs—reveal a highly dysfunctional process in which serious concerns raised by other EPA offices were ignored or suppressed.

ORIA Resistance to Disclosure Pursuant to Freedom of Information Act

On June 11, 2009, Public Employees for Environmental Responsibility (PEER) submitted a Freedom of Information Act (FOIA) request to EPA for all records associated with the development of the updated PAGs. This request was for all records from ORIA, but also any comments or criticisms from other divisions of EPA and from outside the Agency.

EPA failed to respond to the FOIA request by the statutory deadline. On July 15, the Agency wrote us indicating it would need an additional sixty days to provide all of the documents requested. The following day, EPA notified PEER that it would do a rolling production of documents, beginning August 10. No responsive documents were provided by August 10, nor by sixty days from the July 15 commitment to provide all the requested records within that time. On September 17, PEER filed an administrative appeal. EPA failed to respond to the appeal within the statutory time period. PEER therefore filed suit under FOIA in the U.S. District Court for the District of Columbia on October 28, 2009. Only under pressure of that lawsuit has EPA finally begun in the last couple of months releasing the documents that should have been provided nine months ago.

A review of the released documents suggests why there may have been such resistance at ORIA to their disclosure. They show a decision-making process gone awry. Substantive concerns raised by the Office of Superfund Remediation and Technology Innovation (OSRTI), among others, about the appropriateness and protectiveness of ORIA's proposals to markedly weaken drinking water and/or long-term cleanup standards were routinely ignored or viewed as problems to be overcome by trying to pressure the other offices to go along with ORIA's proposed relaxation of protections. Political factors appear to have outweighed scientific or environmental concerns.

The Central Concerns

The proposed PAGs would apply, by their own terms, to a wide range of radioactive releases; indeed, to any release of radioactivity for which a protective action might be contemplated. Two key components of the PAGs were: (1) proposed standards for how much radioactivity would be permitted in drinking water for one or more years after the initial release, without requiring some action to protect the public that would allow thousands of times higher radionuclide concentrations than permitted under the Safe Drinking Water Act (SDWA), and (2) proposed guidance for long-term cleanup standards for the late phase after a release, an approach called "optimization" that would allow use of cleanup "benchmarks" orders of magnitude more lax than anything EPA had previously considered protective, undermining in particular EPA's CERCLA (Superfund) standards.

The concerns about these proposed radical departures from EPA past practice, and their potential to undermine EPA existing programs, are summarized in a January 23, 2009 email from the EPA Office of General Counsel (OGC), included here as Attachment I, which states:

> Notwithstanding the statement in the disclaimer that this guidance doesn't affect CERCLA and SDWA, the option of using this approach does have an effect. Many things in this guidance are very inconsistent with our remedial action program and the statute, NCP and existing guidance we use in that program. The approach in this guidance is not confined to just short-term emergencies, could undermine what we do at NPL sites (especially federal facility ones involving DOE), how we determine protectiveness, and how we use ARARs like MCLs under the SDWA.

The OGC email notes that the proposed PAG guidance for drinking water in the intermediate phase would allow radionuclide concentrations that are orders of magnitude higher than the Maximum Copntaminant Levels (MCLs) permitted under the Safe Drinking Water Act:

> As I understand it, this guidance would allow cleanup levels that exceeds MCLs by a factor of 100, 1000, and in two instances 7 million, and there is nothing to prevent those levels from being the final cleanup achieved (i.e., it's not confined to immediate response or emergency phase).

Additionally, the proposed long-term cleanup standards in the PAGs are a hundred to a thousand times higher than the outer limit of EPA's historically acceptable risk range, far beyond what EPA traditionally has deemed protective of health and the environment:

> Similarly, we typically use 15 *millirems* as the level that's within the NCP's cancer risk range – levels in this guidance measured in *rems* probably would make DOE/PRPs [Department of Energy/Principal Responsible Parties] happy but would not be considered protective by our CERCLA remedial program standards and would undermine our Superfund cleanup decisions, as well as oversight and enforcement (including potentially both private party/cost recovery and federal facility agreements under CERCLA section 120). Having a simple phrase in the disclaimer that this doesn't affect Superfund will not keep DOE and others from using this document as a legal weapon (e.g., we are being arbitrary under CERCLA when ORIA has determined different cleanup levels that are protective). (Emphasis in original)

These concerns are explicated in more detail in formal comments submitted by EPA's Office of Solid Waste and Emergency Response (OSWER) Superfund Remedial Program, discussed below.

I. Proposed Weakening of Drinking Water Standards

The Superfund Remedial Program prepared a series of spreadsheets comparing the proposed Drinking Water PAGs with the longstanding Safe Drinking Water Act MCLs, concluding that "a number of the ORIA PAG concentrations are thousands of times higher…(a few are over a hundred thousand times higher)." In the formal Comment Form, they point out that "Providing alternative drinking water in the intermediate phase should not be that difficult, the government has been doing it at sites and disaster areas for years." Yet the ORIA PAGs would force people to drink water with radionuclide concentrations thousands of times, or more, higher than the Safe Drinking Water levels, without protective actions like treatment or providing alternative water supplies. The Superfund Remedial Program concerns about the ORIA Drinking Water PAGs are enclosed as Attachment II.

They provided three set of tables comparing the ORIA proposed drinking water levels with the longstanding MCLs. The ORIA drinking water PAGs are called Derived Response Levels, or DRLs, and in the far right column of each spreadsheet they are compared with the MCLs. As one can see, the differences are extraordinary. Nickel-63 (Ni-63), for example, would be

allowed at 24,400 times the MCL level; Strontium-90 (Sr-90) at 841 times the MCL; Iodine-129 (I-129) at 1750 times higher than the Safe Drinking Water level; and so on.

As the Superfund Remedial Office notes on p. 3 of its explanation of the tables, if the factor by which the ORIA Drinking Water PAGs, the DRLs, exceed the Safe Drinking Water Act MCLs were 840, "then **1 month** of drinking 2 liters of water at DRL value will equal amount of exposure of drinking water at the MCL level for a lifetime (70 years)" and if the ratio were 25,500, "then **1 day** of drinking 2 liters of water at DRL value will equal amount of exposure of drinking water at the MCL level for a lifetime (70 years)." If the factor by which the PAG-DRL exceeds the MCLs were 127,750, "then drinking **1 glass** of water (12 ounces) at DRL value will equal amount of exposure" allowed under the Safe Drinking Water Act for a lifetime of exposure. (Emphases in original)

Thus, for example, drinking water at the concentrations ORIA proposed as permissible for Ni-63 for slightly more than a day would exceed the permissible radiation exposure for a member of the public from a lifetime of water consumption under the Safe Drinking Water Act. A month of drinking water with Sr-90 concentrations at the levels proposed by ORIA would permit exposure greater than a lifetime's permissible exposure under the Safe Drinking Water Act. A couple of weeks of drinking water with I-129 at the PAG level would be the equivalent of a lifetime's permissible exposure under the Safe Drinking Water Act. And so on. (It is important to note that ORIA proposed permitting people to drink water with these concentrations, without protective actions being taken, for a period of at least a year).

The dramatic weakening of drinking water standards for radionuclides, by orders of magnitude, was detailed by the Superfund Remedial Program, but those concerns were ignored by ORIA and it is not clear that this information ever worked its way up to the decision-makers.

II. Proposed Weakening of Long-Term Cleanup Standards

ORIA proposed that EPA abandon its long practice of requiring contamination cleanup to levels within EPA's acceptable historic risk range of 10^{-6} to 10^{-4} (one in a million to one in ten thousand). Instead, ORIA proposed a process called "optimization" in which cleanup standards vastly higher could be chosen from a set of "benchmarks".

The material provided under FOIA makes clear that among those contemplated benchmarks were doses to the public in the 1 – 10 rem per year range, to be received year after year for decades. As OGC pointed out in the email quoted earlier, EPA's longstanding position had been that radiation doses above15 millirem (thousandths of a rem) were non-protective, exceeding the upper level of the acceptable risk range. Thus the optimization process proposed by ORIA could allow doses to the public a hundred to a thousand times higher than the upper level of the risk range, i.e., risks in the 10^{-1} range (an extraordinary one or more cancers for every ten people exposed).

In its comments on the proposed ORIA PAGs, the Superfund Remediation Program (which is responsible for the standards for long-term cleanup of the nation's most contaminated sites), enclosed here as Attachment III, states about the proposed PAGs:

> There is a large amount of incorrect and confusing information related to late-phase cleanup/optimization and EPA's acceptable levels for chronic exposures. These issues may adversely impact (1) EPA's ability to use an appropriate optimization process, and (2) existing EPA programs.

They note that the PAGs imply that "high doses" in excess of EPA risk range "would be acceptable, which it is not." They oppose the recommendation "that it be allowable to release from controlled areas radioactively contaminated material that may cause exposures to members [that]… is well above health based limits of 1×10^{-4}, which corresponds to approximately 5 mrem/yr." And they recommended:

> Replace optimization with EPA risk based approach. There is nothing fundamentally unique about contamination from radiation emergencies that warrants new public health and environmental standards for late-phase. Current standards and policies are sufficiently flexible to achieve sound, scientifically based, cost-effective and protective outcomes with broad public acceptance. For the late-phase, we recommend that decision makers seek to achieve a cleanup goal that falls within the Agency's risk range of 10^{-6} to 10^{-4} lifetime cancer risk that meets other appropriate health and environmental criteria (e.g., drinking water standards.

These recommendations were ignored.

Conclusion

Environmental and public health groups have urged EPA to not approve the PAGs proposed by ORIA with this dramatic weakening of drinking water and long-term cleanup standards and to rely instead on EPA's longstanding Safe Drinking Water levels (MCLs) and Superfund cleanup standards. What is intriguing in the much-resisted release of internal EPA records regarding the ORIA proposal is that similar concerns were attempted to be raised internally, and were ignored.

We hope you will take these matters into account as you move toward a final decision whether to approve ORIA's proposed radical departure from longstanding EPA positions on public protections.

Sincerely,

Jeff Ruch
Executive Director

cc w/ enclosures: Senator Barbara Boxer, Chair, Committee on Environment & Public Works
Congressman Ed Markey, Chair, Subcommittee on Energy & Environment
Gina McCarthy, Assistant Administrator for Air and Radiation
Mathy Stanislaus, Assistant Administrator for Solid Waste & Emergency Response
Peter Silva, Assistant Administrator for Water Programs
Scott Fulton, General Counsel