

Draft Paper for review by members of the SAB Committee on Science Integration for Decision Making--  
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policy.

03/11/11- Draft report

1 decision making. Part of the MIRA process included engaging state and industry  
2 stakeholders during the construction of the nonattainment analysis. The result of using  
3 MIRA in the ozone nonattainment designation process was that Region III's designation  
4 decision was not challenged when it was announced.

5 *actively*  
6 **Approving scientifically credible state sulfate water quality criteria to protect**  
7 **aquatic life.**

8 Region 5 *Illinois* worked across disciplines and organizations to fill a key data gap involving  
9 sulfates in water bodies. EPA's existing water quality criteria for sulfate was set at a level  
10 designed only to protect livestock from *ingesting* drinking water contaminated by sulfates. EPA  
11 has no national criteria recommendation for sulfates to protect aquatic life.  
12 Environmental groups asked Region 5 to review and object to State of Illinois National  
13 Pollutant Discharge Elimination System (NPDES) permits for mine wastes contaminated  
14 by sulfates because Illinois EPA was issuing mining permits based on a less stringent  
15 alternative effluent standard for sulfate, rather than limits based on the sulfate water  
16 quality standard.

17  
18 Upon review, EPA agreed to object to the issuance of numerous subsequently proposed  
19 permits. As a result, Illinois EPA backlogged the issuance of more than 80 existing  
20 mining permits and permits for six new mining facilities because the applicants could not  
21 comply with water quality-based effluent limits to meet Illinois' water quality standard  
22 for sulfate.

23  
24 The issue became controversial as coal companies contacted the Administrator and  
25 Regional Administrator about permit delays. To address the problem, Region 5  
26 collaborated over 10 months with a diverse group (including Office of Water scientists, a  
27 representative from ORD's Duluth laboratory who authored EPA's aquatic guidelines, a  
28 representative of the coal company and their contractor, and environmental groups) to  
29 develop a new assessment of the science, including a review of the literature and new  
30 toxicity data. The resulting assessment determined that sulfate toxicity is affected by  
31 chloride and water hardness and resulted in complex criteria equations that the state  
32 adopted, were approved by EPA and that the "coal companies and environmental groups  
33 could live with." Several other states are *contemplating adopting* ~~working to adopt~~ the approach. The effort was  
34 successful because EPA kept the focus on using defensible criteria that were protective of  
35 aquatic life, while remaining open to new information.

36  
37 **Superfund site decision to use point-of-entry and point of use filtration rather than**  
38 **bottled water.**

39 Region 7's Superfund Division cited effective collaboration with ORD's National Risk  
40 Management Laboratory in providing point-of-entry and point-of-use water filtration for  
41 homes in a community after a Superfund On-Site Coordinator discovered that "people  
42 sometimes don't use bottled water" provided by the Region. The coordinator brought this  
43 practical concern to the attention of the "Regional Decision Team" of risk assessors, the  
44 site manager, and counsel. The ORD National Risk Management Research Laboratory

Comments  
to  
Carole  
by  
3/25  
at  
latest.

a representative  
from Illinois  
EPA,

generator of

Indiana  
adopted  
~~similar~~  
the same criteria  
equations  
for  
sulfates,  
and