



Texas Radiation Advisory Board

Michael Ford, C.H.P.
Vice Chair

1100 West 49th Street
Austin, Texas 78756
(512) 834-6688 ofc
(512) 834-6708 fax

Executive Committee
Michael Ford, C.H.P
Elaine Wells, M.S
Jimmy Barker, P.E.
W. Kim Howard, M.D.

May 6, 2002

Robert J. Huston
Chairman
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, TX 78711-3087

Dear Chairman Huston:

I am writing you today to explain why the Texas Radiation Advisory Board (TRAB) in its 6 April 2002 meeting recommended that 30 TAC Sec. 290.108 not be proposed for rulemaking.

In short, we believe that: (1) the revised EPA rules are unwarranted and unsupported by public health information (specifically epidemiological data); (2) the results of unvalidated mathematical models are used to support the diversion of public and private monies toward compliance with the rules; and (3) the rules unnecessarily create a category of radioactive waste for which there is currently no approved method of disposal.

As we discussed with your staff in our meeting on 5 April 2002, the most significant change to the existing rule is the addition of uranium as a regulated substance in drinking water. The fact that the existing regulations have been unchanged in Texas since 1971 is now well understood by the TRAB; however, the Environmental Protection Agency's (EPA) proposed rule in 1991 raised the question of appropriate limits supported by epidemiological data.

EPA's apparent reversal in April of 2000 with the issuance of the Notice of Data Availability (NODA) document was supported only by the recently-developed models described in Federal Guidance Report (FGR) 13. This Report was roundly criticized in the Health Physics community because the levels to which the FGR 13 models seek to analyze are not supported by any published epidemiological data. A documented TRAB review also commented on the inadequacy of the FGR 13 document.

May 6, 2002

Page two

This position is further supported by EPA's *own* statements in the NODA document:

“ EPA recognizes the inherent uncertainties that exist in estimating health impacts at the low levels of exposure and exposure rates expected to be present in the environment. EPA also recognizes that, at these levels, the actual health impact from ingested radionuclides will be difficult, if not impossible, to distinguish from natural disease incidences, even using very large epidemiological studies employing sophisticated statistical analyses.” [FR21600, Vol. 65, No. 78, 21 APR 2000]

The federal agency concedes that it is practically impossible to distinguish natural disease rates from disease rates enhanced by the minuscule levels of radioactive materials represented by the MCLs for drinking water. However, the EPA essentially ignores its own admonitions in the NODA and concludes that it plans to proceed with the revised levels in the NODA, maintaining the unsupported and unvalidated assumption that the linear, non-threshold model holds at the levels represented by the MCLs. When confronted with such unyielding adherence to the results of mathematical models, the TRAB has little choice. We cannot and will not support the diversion of public and private monies to fund EPA's mathematical exercises that have no basis in fact.

Similarly, the TRAB cannot support the TNRCC's position that “[T]he proposed rulemaking would *materially protect* public health and safety by preventing the exposure to unacceptable levels of radium-226, radium-228, and gross alpha particle radioactivity naturally occurring in groundwater which may be used as a public drinking water source in various geographical areas in Texas.” [*Emphasis added*. Ref. 22 FEB 02 draft of 30 TAC Sec. 290.108, pg 10]. There are no data to support the assertions made in that statement.

The view held by the TRAB of this rulemaking activity is essentially identical to that expressed in a 19 September 2000 letter to Governor Bush on the subject of the EPA's proposed radon in drinking water rule:

“... The TRAB's concerns are that the burdens placed on Texans by the changes in the EPA rules are unwarranted and unsupported by public health information. The public health hazard this rule presumes to address has never been scientifically demonstrated.

The TRAB understands that community water system (CWS) funds are very limited; the TRAB believes that issues of water supply, infrastructure, and basic hygiene should take precedence over radon mitigation. These critical CWS funds should not be exhausted on the mitigation of a hypothetical risk of radon in water, but instead on the mitigation of water-borne pathogens that are causing real death and disease throughout the nation today. In the end, it is not a question of what is the most cost-effective alternative for Texans, but ultimately it is a question of 'who pays' for the mitigation of a minuscule or non-existent risk. ...”

May 6, 2002

Page three

To further complicate matters, the radioactive waste unnecessarily generated by this rule creates additional hazards for Texans for which there is currently no approved method of disposal. The small rural CWSs most affected by these proposed rules could be financially devastated by the liability and cost of safely handling and disposing of the radioactive materials created by these rules. In fact, as stated in the attached comments to the proposed rule, the proposed rulemaking has the potential to materially endanger the public health and safety by creating radioactive wastes without providing for their safe handling and disposal and by limiting access of some Texans to safe, pathogen-free water. In many cases, these small rural CWSs are the sole source of suitable pathogen-free water for rural Texans.

Mr. Chairman, the TRAB understands the difficult position this puts the TNRCC in especially in regard to primacy status. However, the Board must take this position when the mitigation of an unsubstantiated hazard is involved in removing monies from limited public health coffers.

We will continue to work closely with the TNRCC staff in resolving this matter for the benefit of all Texans. Additional comments on the proposed rule are attached.

If you have any questions regarding the position of the TRAB on this matter, please feel free to contact me at your earliest convenience.

Sincerely,

Original signed by:

Michael Ford, C.H.P.

Vice Chair

cc: Governor Rick Perry
Representative Warren Chisum, Chair, Committee on Environmental Regulation
Senator J.E. "Buster" Brown, Chair, Senate Natural Resources Committee
Environmental Protection Agency

**TRAB Comments on Proposed 30 TAC §290.108,
Radiological Sampling and Analytical Requirements**
(M. S. Ford)

Page 10, ¶1, 1st and 2nd sentences: The fact that this rule may divert limited monies from the Community Water Systems that might otherwise be used for infrastructure improvements, security, and/or treatment of water-borne pathogens impacts on the “public health and safety” criterion of the “major environmental rule” test.

Page 10, ¶1, 4th and 5th sentences: The statements that the proposed rulemaking could not have a material effect on the “major environmental rule” criteria, but would “materially protect public health and safety” are both incorrect. The negative material effect on the economies of CWSs is demonstrable as is the potential negative impact on public health and safety for the very same reason.

Page 10, ¶2, 1st sentence: § 341.031 seems to provide the option of adopting TNRCC standards or EPA standards. Is this at odds with primacy requirements?

Page 18, §290.108(c)(1)(A)(i): For clarity, it would be beneficial to add the following statement to the end of the sentence, “. . . and hereafter referred to as ‘initial monitoring.’”

Page 19, §290.108(c)(1)(B)(i): What is the “Detection Limit”? It is not defined, nor is there a reference to a common definition. Is it Decision Level, Minimum Detectable Activity, or something else?

Page 21, §290.108(c)(1)(E): The reference to “executive director” and “its” are not consistent. The latter

Page 22, §290.108(c)(1)(G)(iv): Please state the basis by which one half of the gross alpha detection limit is “used to determine compliance and the future monitoring frequency for radium 226 [sic] or uranium.” This does not appear to be intuitively obvious.

Page 24, §290.108(d): Reference the process by which the executive director certifies laboratories for analyzing radiological samples.

Page 25, §290.108(f)(1)(A): The precision of the activity limit should be stated numerically (i.e., not “five”); “theta” should be replaced with “sigma” which is the common symbol for standard deviation.

Page 25, §290.108(f)(1)(B): The precision of the activity limit should be stated numerically (i.e., not “five” and not “three”).

Page 25, §290.108(f)(1)(D): Substitution of artificial value in lieu of actual data constitutes data censoring and is highly improper. There is no reason to substitute artificial values in place of valid data, especially when the artificial values would tend to drive the averages higher.

Page 27, §290.108(g)(2): The limits for “man-made” radioactivity do not appear to be specified.