ILLINOIS POLLUTION CONTROL BOARD
September 27, 1990

IN THE MATTER OF:	)	
	)	
GROUNDWATER QUALITY STANDARDS	)	R89-14
(35 ILL. ADM. CODE 620)	)	(Rulemaking)
	)	

CONCURRING OPINION (by B. Forcade):

I respectfully concur with today's action. I agree with most of the concepts articulated in the proposal. However, I believe that in certain respects the proposal should have been made more protective of groundwater. Therefore, I conc

One of the central conflicts of this proceeding ha een the area of non-degradation. The Illinois Environmental Pr ction Agency ("Agency") had submitted regulatory language for 5 Ill. Adm. Code 620.401, that precluded "use" degradation, i.e., it would only preclude that amount of contamination which would impair the use classification of a groundwater. For example, the Agency's proposed limit for Xylenes is 10.0 mg/l for Class I groundwater. Under the Agency's approach, a facility located above a Xylene-free body of groundwater could contaminate that groundwater from its present concentration of 0.0 mg/l of Xylene up to 9.9 mg/l of Xylene without running afoul of any regulatory environmental protection laws.

In response to this issue, the McHenry County Defenders, Citizens for a Better Environment and the Illinois chapter of the Sierra Club (collectively, "the Defenders"), submitted regulatory language at Sections 620.301-303, that precluded "numerical" degradation, i.e., it precluded contamination that would cause any numerical increase of the contaminant levels in groundwater. In the Defenders' proposal, a facility located above a Xylene-free body of groundwater would be in violation of regulatory provisions if it caused the concentration to increase from 0.0 mg/l to 0.1 mg/l of Xylene.

The majority today selected first notice language that does not clearly choose one approach over the other. The language of the majority states as follows, at Section 620.305:

> Groundwaters whose existing quality is better than the water quality standards of this Subpart at the effective date of this Part shall be maintained at their existing high quality. Such waters shall not be lowered in quality unless and until it is affirmatively demonstrated that such change will not interfere with or become injurious to any

> appropriate beneficial uses made of, or presently possible in, such waters and that such change is justifiable as a result of necessary economic or social development.

The above quoted language seems to imply that something more than use degradation is precluded, yet the majority does not specifically adopt language that precludes numerical degradation. I simply do not know what "quality" degradation includes. My concern is whether an increase in Xylene concentration from 0.0 mg/l to 0.1 mg/l would be considered a degradation of quality. Further complicating the issue is page 5 of the majority Opinion, which states:

> If one accepts, as the Board does (see below), that all groundwaters should be protected from use degradation....

This seems to imply that the majority adopts use degradation as the standard.

In a similar manner, Section 620.305 does not state who should make downgrading decisions or how they should be made. It is unclear whether the affirmative demonstration would be made to the Agency, who gets notice, and what the standards are.

I support the Defenders' proposal of precluding any numerical degradation (but I would include a provision for statistical significance), except as provided by Board determined adjusted standard procedures. The Board has already adopted prevention of numerical degradation as the appropriate concept as it applies to non-hazardous waste landfills at 35 Ill. Adm. Code 811.320. For hazardous waste facilities, the standard of 35 Ill. Adm. Code 724.192-194 precludes numerical degradation except for 14 specified contaminants.

My second area of concern pertains to Section 620.501. This section determines who will be subject to the investigation and preventive management provisions in Subpart E of the regulatory proposal. I disagree that these provisions should apply to so few facilities (new facilities and, in the future, a few existing facilities).

Generally speaking, those who are subject to Subpart E must conduct sampling and analysis procedures whenever contaminated groundwater is detected. Section 620.501 exempts existing facilities from these requirements unless they are located in a setback zone (no setback zones have yet been defined). However, under the proposal, if a public water supply drawing from a shallow well were to detect contamination, then only new facilities in the area would be required to monitor to determine if they caused the contamination. Presently, any existing

facility could only be required to conduct such sampling and analysis as a result of a formal enforcement action. Therefore, existing facilities that contaminate groundwater would not be identified as the source of the contamination, nor would they be required to engage in any remedial action absent formal enforcement.

I find this particularly troubling since the statutory language creates no exemption for existing sources. The relevant statutory language for this Subpart, Ill. Rev. Stat., ch. 111 1/2, para. 7458 (b)(4), directs the Board to promulgate regulations, considering in particular:

> application of nondegradation provisions for appropriate groundwaters, including notification limits to trigger preventive response activities.

I see nothing in that statutory language to imply that nondegradation provisions and preventive response activities should be limited to new facilities. I would agree with the position taken by the Defenders and the Chemical Industry Council of Illinois (PC #3), that preventive management procedures should apply to all regulated facilities, new and existing.

My third area of concern relates to intertwining of groundwater standards and the groundwater classification scheme. It also involves the interrelationship of this regulatory proposal and the proposed regulation of new and existing facilities within set-back zones and regulated recharge areas (R89-5; First Notice; August 31, 1989). My concern is that when these correlated provisions are evaluated, there is far too little in the way of prevention of groundwater contamination. This may be best articulated by a hypothetical example.

Assume for a moment that there is an area with generally pristine groundwater and that such groundwater is in existing use as a public water supply and has reasonable demand for present and future consumption. Assume further that the area has a reasonably heavy population of existing potential primary and secondary sources as those terms are defined in the Act. As a last factor, assume that the groundwater had been historically contaminated with just one contaminant to a level above the water quality standard (this could include a detectable level of a carcinogen). Because this hypothetical groundwater does not meet the criteria for protection as a Class I aquifer (even though it is presently used as a public water supply), the general resource groundwater quality standards of Section 620.320 apply; these are generally five times the potable resource groundwater standards. Because the proposed regulations (R89-5; August 31, 1989; Section 615.201) only covers six categories of existing facilities in regulated recharge areas and set-back zones, and then only

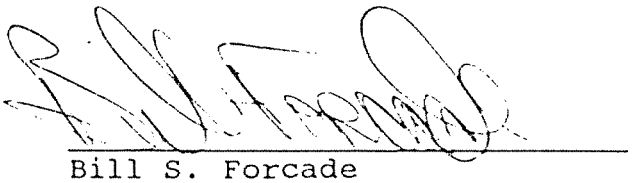
requires these facilities to comply with numerical water quality standards (Section 615.203(a)), these six categories of existing facilities will be allowed to contaminate the presently pristine water up to five times the generally acceptable potable water standards for all contaminants before any violation would occur or any remediation would be required. Because all other existing facilities inside these zones, as well as all existing facilities outside of regulated recharge areas or set-back zones, are not required to monitor groundwater, any contamination they cause would likely go undetected.

Taken as a whole this hypothetical situation is not unlikely. However, the scenario does not seem consistent with the legislative declaration to "restore, protect and enhance the groundwaters of the state."

I would prefer: (1) to require that all groundwater with less than 10,000 mg/l of total dissolved solids and greater than 150 gallons per day yield be classified as a potential potable source (Class I) unless it is affirmatively demonstrated to the Board as incapable of such use, (2) to require that all new and existing regulated sources above Class I groundwater be held to the no numerical degradation standard, and (3) to require that upon any detection of statistically significant increases in contamination, all new and existing sources must comply with the Preventive Management Procedures and Corrective Action found in Subpart E.

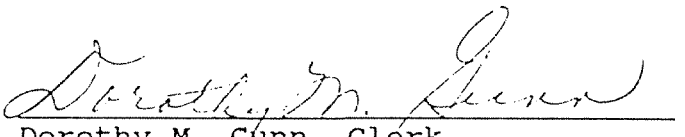
I also have some concerns regarding the sampling and analysis provisions. Only certain types of wells can be used, and only certain types of sampling procedures and reporting requirements are acceptable. I find these requirements overly restrictive, since if these requirements are not met it would appear that no groundwater quality violation can be shown and no public health advisory can be issued.

For example, Section 620.420(b)(4) requires chain of custody control over groundwater monitoring samples. I doubt that the majority of public water supplies in Illinois keep chain of custody control over their samples. Such things as chain of custody are traditionally reserved for evidence preservation in criminal law. Even in the criminal law setting, whether chain of custody has been established goes to the weight of the evidence, not its admissibility. See 23 C.J.S. Criminal Law, Section 846 (b). Here the requirements for consideration in an administrative civil matter seem more restrictive than for a criminal trial. If historical data and analysis was not conducted according to these requirements, it might be argued that such data is not valid to show groundwater quality changes. I would relax these rules to allow consideration of all information, with such factors going only to the weight to be given to the information.



Bill S. Forcade
Board Member

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Concurring Opinion was filed on the 10th day of October, 1990.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board