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ENVIRONMENTAL CONTROLS

DRINKING WATER REGULATION

BY NICHOLAS A. ROBINSON*
New York, New York

As 1974 drew to a close, President Ford signed legislation extending federal jurisdiction into a new realm: the quality of public drinking water supplies. This Safe Drinking Water Act is an interesting piece of legislation. It probably will become one more bit of data for the MOLDS System, and the Act, fortunately, has provisions which meet some of the criteria which Luther Avery set forth [see page 602 herein]. Before describing the Act, I want to present a few statistics and background facts about this innocent bit of H₂O.

Water-borne biological diseases were pretty well eradicated between the Civil War and World War I, but the growth in population and the intense use of water resources and land adjacent to drinking water sources have meant a recurrence of these biological hazards. These alone were not sufficient to create the Safe Drinking Water Act; rather it was the concern for cancer. The heavy pollution of the nation's waterways has affected the nation's drinking water, and it is not now sufficient simply to treat it for biological wastes or biological health hazards.

Of the municipalities with the 50 highest incidents of cancer, correlation with drinking water contamination appears likely.¹ For more than a decade the National Cancer Institute has warned that increasing pollution of waters with carcinogenic agents, and the inability of the presently used filtration equipment to remove adequately such contaminants from the municipal drinking water supplies, has created conditions which may result in serious cancer hazards to the nation's general population.² The inquiry now proceeds to determine what the cancer risk may be, what to do about it and what other health hazards may exist in the nation's drinking water.

The Environmental Defense Fund (EDF), a national legal and scientific public interest organization, studied the relation of chemical carcinogens in the Mississippi River and promptly advised health authorities to warn against the cancer hazards in municipal drinking water taken from the river. Even the chlorination procedures produced additional carcinogenic compounds.³

EDF concluded that, "There is little question that industrial wastes contain a variety of potentially toxic substances which are routinely discharged into our nation's waters."⁴ Principal contaminants include petroleum prod-

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¹ E.D.F., "The Implications of Cancer-Causing Substances In Mississippi River Water" (Nov. 6, 1974) table 2 at p. 24.

² W. C. Heuper and W. W. Payne, "Carcinogenic Effects of Adsorbates of Raw and Unfinished Water Supplies," 39 AM. J. CLIN. PHTH 475, quoted in *supra* note 1 at 33.

³ *Supra* note 1, at 36.

⁴ *Id.* 1-2.

ucts, coal tar, chemical compounds from dye, rubber, plastic and pharmaceutical plants, and pesticides, herbicides and soil sterilants. Domestic sewage effluents are estimated to contribute to the nation's waters over 50 different chlorinated hydrocarbons in a volume of 1,000 tons annually.

The health threat from these environmental contaminants prompted Congress to enact the Federal Water Pollution Control Act Amendments of 1972 requiring, in part, that the U. S. Environmental Protection Agency ban toxic effluents and require pretreatment of certain wastes before disposal in municipal sewer systems.⁵ Congress also required that pollutants not be discharged if they failed to "assure protection of public water supplies." The Environmental Protection Agency is charged with responsibility for establishing effluent limitations to secure such protection in discharges.⁶

Unfortunately, as the EDF noted, these pollution laws simply are not being implemented fast enough to protect the public. While the typhoid, cholera, dysentery and other waterborne diseases current in America's drinking water between the Civil War and World War I have been largely eliminated, the nation's water systems have not responded to contamination dangers from the sophisticated environmental pollutants of the post-World War II era. The water piped to 160 million Americans is still not safeguarded from cancer agents.⁷

The failure of local and state government to assure drinking water quality brought the problem again to Congress. In June of 1973, the Senate passed a bill for regulating the purity of drinking water supplies,⁸ but the bill repeatedly failed to move in the House of Representatives.

After a vigorous legislative battle in which opponents sought to create loopholes for such operations as the oil industry's underground waste injection,⁹ both houses of Congress finally adopted the Safe Drinking Water Act.¹⁰ The Act became law on December 16, 1974.

Now enters the controversial period of implementation of the Act. It is not at all certain that drinking water will indeed be made safe in the near

⁵ See, eg. §307 of the Federal Water Pollution Control Act Amendments of 1972 ("Water N.Y.L.J., Vol. 170, No. 101 (November 27, 1973), p. 1, col. 1.

⁶ Section 302 of the Water Act.

⁷ See the articles in CONSUMER REPORTS for June, July and August of 1974, by Robert Harris and Edward Brecher.

⁸ S. 433.

⁹ See discussion of H.R. 13002 in the article "Safe Drinking Water," Sierra Club National News Report (November 7, 1974); see also "House Approves Drinking Water Bill on Heels of Recent Carcinogen Reports," 5 BNA ENVT. REP. CURRENT DEVS. 1167 (Nov. 22, 1974).

¹⁰ 42 U.S.C. 1401 *et seq.*; P.L. 93-523; 88 Stat. 1660; S. 433, 93rd Cong. The full legislative history may be found as follows:

a. HOUSE REPORT No. 93-1185 accompanying H.R. 13002 (Comm. on Interstate and Foreign Commerce).

b. SENATE REPORT No. 93-231 (Comm. on Commerce).

c. CONGRESSIONAL RECORD:

Vol. 119 (1973): June 22, considered and passed Senate.

Vol. 120 (1974): Nov. 19, considered and passed House, amended, in lieu of H.R. 13002.

Nov. 26, Senate agreed to House amendments with an amendment.

Dec. 3, House concurred in Senate amendment.

d. WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS:

Vol. 10, No. 51 (1974): Dec. 17, Presidential statement.

future. Until now, only the some 650 water supply systems serving interstate carriers (of the 40,000 water supply systems nationally) were subject to Public Health Service inspection.¹¹

The Safe Drinking Water Act extends federal authority further than has ever been contemplated in this traditionally local health field. The Act amends the Public Health Service Act¹² and adds a new Title XIII intended to force state action to protect drinking water. Its provisions will benefit users of drinking water supplies and will place new constraints on water supply companies, municipalities, state agencies, corporations and individuals with operations that affect water supply sources in any way. New record-keeping requirements are imposed on water suppliers, and inspection and penalty provisions have been enacted.

Many attorneys will find that a number of their clients are subject to the Act. The attorney does not have to represent a municipality or a public utility that supplies water to become involved. A landowner who has wells on his property, who draws water for his agricultural or gravel operations, and who employs more than 25 people in this operation, is subject to the Act. Similarly, if this landowner rents a part of his land to a restaurant, furnishing water to the restaurant from his wells, and if the restaurant has 25 people coming through on an average day, all of these people are entitled to the landowner's compliance with the Act as a public water supplier.

Large suburban private housing projects and new communities which do not use a public water supply, but are serviced by wells, are covered. The Act also expressly covers any federal agency and federal installation, so that the federal government itself in its myriad manifestations is not excluded.

Coverage

National primary drinking water regulations apply to each public water system in the nation with four exceptions.¹³ Such "primary" regulations specify those contaminants (any physical, chemical, biological or radiological substance in water)¹⁴ which have *any* adverse human health effect in a maximum level economically and technically feasible to obtain and the procedures to assure such.¹⁵

Promulgation of Regulations

The Administrator of the U. S. Environmental Protection Agency promulgated "Proposed Interim Primary Drinking Water Standards"¹⁶ within

¹¹ E.D.F., A Summary and Evaluation of Selected State Drinking Water Systems (Dec. 2, 1974) at p. 21-3.

¹² 42 U.S.C. 201 *et seq.*

¹³ *Supra* note 10 at §1411. The four exceptions are systems which sell no water, which are not passenger carriers in interstate commerce, which obtain water exclusively from a public system which is not exempt, and which have no collection or treatment facilities of their own but simply store and distribute.

¹⁴ Section 1401(6).

¹⁵ Section 1401(1).

¹⁶ 40 Fed. Reg. 11989 (March 14, 1975).

three months of the Act's adoption as required; these were to be finalized by June of 1975.¹⁷

These "primary" regulations are subject to periodic amendment. They are to be effective 18 months after adoption,¹⁸ and must specify each contaminant identified as a health hazard.¹⁹ The best feasible technology available, taking cost into consideration, is to be provided.

Within ten months of adoption, or October, 1975, national "secondary standards were to be finally promulgated."²⁰ These are standards "requisite to protect the public welfare," including odor, appearance, or other adverse effects.²¹

Despite the statutory deadline, the EPA decided to delay finalization of the regulations for interim drinking water standards. (See 40 Fed. Reg. 33224 (August 7, 1975) and 40 Fed. Reg. 40538 (September 3, 1975).) The stated reason for doing so was to allow further consultation with municipal drinking water suppliers, the Environmental Defense Fund, and others concerned with the promulgation of those standards. After further extensive consultations, the initial primary drinking water standards were issued in regulations to be released in December of 1975, to become effective in June of 1977. (See Press Release R-310.)

The primary-secondary dichotomy echoes the Clean Air Act amendments which have similar provisions.²² Bottled water suppliers are subject to new regulation added by the Safe Drinking Water Act to the Food, Drug & Cosmetic Act.²³

State Enforcement

It is contemplated that the states will be given primary enforcement responsibility for these standards after they adopt standards at least as stringent as federal standards and have created enforcement and record-keeping procedures for implementation. States must apply to the EPA for such a delegation of regulatory authority.

If the state fails to meet the requirements of such regulations after delegation, and further fails to remedy the failure, the EPA Administrator may sue to compel compliance in federal court. The suit may be directed at the state, local government or drinking water supply system.²⁴

Variations and Exemptions

Where the "raw water sources" available cannot meet "primary" standards despite the best treatment facilities, a state may grant a variance so long as a compliance system to develop control methods is created and the variance will not result in "unreasonable risk to health." Notice and hearing provisions are set forth.

¹⁷ *Supra* note 10, at §1412.

¹⁸ *Id.* §1412(a)(3).

¹⁹ *Id.* §1412(b).

²⁰ *Id.* §1412(c).

²¹ *Id.* §1401(2).

²² The Clean Air Act amendments are codified at 42 U.S.C. 1857. See generally the symposium in 4 *ECOLOGY L. Q.* 591 *et seq.* (1975).

²³ 21 U.S.C. §341 *et seq.*, adding a new §41.

²⁴ *Supra* note 10, at §§1413 and 1414.

Where a given water supply system cannot comply with any "primary" regulation and such system was operating when the "primary regulation" was adopted, and no unreasonable risk to health is involved, an exemption can be granted.²⁵ A compliance schedule is to be provided. The test for exemption is whether or not compliance is possible because of "compelling factors (which may include economic factors)."²⁶

Underground Drinking Water Sources

Special regulations were to be promulgated by June of 1975, for underground drinking water sources. They must prevent any underground injection which endangers drinking water sources. Temporary injections may be allowed for up to four years from enactment.²⁷ Deep well waste disposal systems are likely to be severely scrutinized.

States are to enforce the underground injection ban with the same delegation procedure for surface water supplies outlined previously.²⁸ Interim regulations of subsurface injections are specified, with any person being allowed to petition for permission to inject.²⁹

Adequacy of Treatment Supplies

Whenever the materials for water purification treatment, such as chlorine or activated carbon, are unavailable to a water supply system, a water supplier may seek a certification of need for such materials from the EPA. If granted, the President may order that the needed materials be provided as necessary. The order runs to the material's manufacturers, packagers and distributors.³⁰

Emergency Powers

Where a contaminant "may present an imminent and substantial endangerment to the health of persons,"³¹ and state or local officials have not acted, the EPA Administrator is to consult such officials and then may issue orders and commence suits for injunctions enforcing the orders. Fines of \$5,000 per day may be imposed by a court for violations of the Administrator's orders.

Grants and Research

A variety of authorizations for research, technical assistance, training of personnel and reports by federal³² and state³³ officials are authorized. Special demonstration and study grants are available also, including studies of the health implications of recycling.³⁴

²⁵ *Id.* §1416.

²⁶ *Id.* §1416(a).

²⁷ *Id.* §1421.

²⁸ *Id.* §§1422, 1423.

²⁹ *Id.* §1424.

³⁰ *Id.* §1441.

³¹ *Id.* §1431(a).

³² Section 1442.

³³ Section 1443.

³⁴ Section 1444.

Record-Keeping and Audits

Every water supplier must keep extensive new records and allow audit and inspection of same. Access to a water facility must be on written notice and secret processes are protected.⁸⁵

Judicial Review and Citizen Suit

As is common with the air, water and noise laws, jurisdiction over enforcement action is allocated among different courts. The District of Columbia Circuit Court has exclusive review of primary regulations.⁸⁶ Citizens may sue on 60 days' notice and all existing statutory or common law rights are preserved.⁸⁷

While regulations were not yet in force, disputes have begun to arise over whether current "emergencies" in safety of water supplies exist. EDF filed petitions with the EPA on December 17, 1974 requesting an expedited program for removing carcinogens and other toxic materials from drinking water supplies in Louisiana, Ohio, Minnesota and Indiana.⁸⁸

EDF reported the rationale for its action as follows:⁸⁹

"Emergency action by EPA is clearly warranted and urgently needed," said EDF staff scientist Dr. Robert H. Harris, a water quality engineer. Recent EPA tests of the water in the lower Mississippi River and the Ohio River have shown that cancer-causing substances are present. An EDF analysis of cancer mortality in southern Louisiana showed a strong statistical correlation between drinking water obtained from the Mississippi River and death from cancer. "It is generally agreed that there is no safe level for exposure to a carcinogen," Harris stated. "Therefore we must act as quickly as possible to remove such substances from our drinking water supplies."

Aquifer Protection

Special aquifer protection from contaminants is provided in section 1424(e). This section was put into the bill as it went through Congress to provide protection for the aquifer in San Antonio, Texas. A residential home developer had been engaged in building a large tract of homes over the land area of the aquifer and several groups in San Antonio, *i.e.*, the Sierra Club, League of Women Voters and Citizens for a Better Environment, made the determination that the sewer plant for and the development of this residential area would contaminate the aquifer which was the sole source for all of the water for San Antonio. These groups had brought a suit challenging the development under the National Environmental Policy Act, but the Fifth Circuit Court of Appeals ruled that there was no legal basis under NEPA to stop the development once the danger had been noted.

In turn, these protectors of the water of San Antonio turned to Congress and Congress provided an interesting section which may find increas-

⁸⁵ Section 1445.

⁸⁶ Section 1448.

⁸⁷ Section 1449.

⁸⁸ EDF Letter, p. 1, col. 1. (January 1975), available from EDF, 162 Old Town Road, East Setauket, N. Y. 11733.

⁸⁹ *Id.*

ing use. It provides that anyone who pollutes or whose acts endanger by pollution an aquifer shall have all his federal aid and benefits removed and suspended. For this to happen, presumably all that must occur is for the EPA to declare that the aquifer is in danger of contamination from the given source, and that source loses all its federal benefits. Unfortunately, however, no one knows what losing everything federal means. Federal benefits range from the insurance on the bank account, to mortgage guarantees, to direct aid and to the planning benefits which were just outlined. Probably no one knows how much will ultimately be withheld, but there is certain to be a substantial problem in sorting that issue out. I would not want to be on the receiving end of figuring out how many of my rights are going to be taken away.

The EPA has made one preliminary ruling in this case; that federal funds will not be eliminated from the entire San Antonio area if they determine the aquifer is in danger of contamination from many sources, but will be denied only to those more limited sources which are found to be the chief sources of pollution. Thus, school aid will continue in San Antonio.

The Environmental Defense Fund has invoked the same provisions of this section 1424 (e), to request that the EPA declare that the entire water-bearing rock system under Long Island in New York State is in fact contaminated and in danger of further contamination from phosphate pollution. EDF also wants another part of this section, the analog to the stick of withholding federal benefits, to be invoked. Under this provision, federal funds would be made available to Long Island to create water treatment facilities to eliminate the nitrates and the phosphates that are polluting the waters. The entire EDF petition is under consideration.

A third situation, one in which my firm is presently engaged, involves a petition filed with the EPA for protection of an underground aquifer in a small community. The aquifer is actually a glacial pocket which has filled up with sand, rock and water and holds water for about 6,000 people annually. It is located in a small town which has no source of water supply except for its wells, and the school system, the shopping centers, the post office, the volunteer firemen and home-owners, in addition to our client, all obtain their drinking water from this underground aquifer. Our client owns substantial property, a part of which includes offices for the State Police, a fish and bait shop and tavern. All obtain their water from the same aquifer. The EPA, the myriad-headed thing that it is, approved a sewer discharge pipe effluent, National Pollutant Discharge Elimination System Permit [NPDES permit], to occur immediately upstream from this aquifer without apparently realizing that it existed. At the same time as the client filed the petition with EPA, it brought suit to revoke the NPDES permit allowing the pollution.⁴⁰ EDF proposes a closed cycle water management plan for Long Island in which waste water would be carefully purified and then returned to the aquifer.⁴¹ The same section 1424(e) provides that federal

⁴⁰ For Edwards Aquifer, see notice in 40 Fed. Reg. 10514 (March 6, 1975; for the aquifer beneath No Bottom Marsh in Somers, see *Petition of Sun Enterprises, Ltd.*, dated April 25, 1975, filed with the U.S. EPA Administrator in Washington, D. C.

⁴¹ EDF Letter, col. 1, p. 4 (March 1975), see note 38 *supra*.

funds can be allocated to help design a project to prevent contamination of an aquifer.

Beyond these immediate administrative procedures, major controversies loom on the horizon. What agents will be deemed contaminants? What is the measure of an "unreasonable" hazard to health. Human cancers have a latency of ten to 40 years—is that "immediate" harm? The cancer threat of asbestos fibers in the Lake Superior waters did not stop Reserve Mining.⁴² How will variances and exemptions be applied in practice and with what differences?

In siting in new development or reviewing existing plant operations, the Act has great potential impact. As data accumulate and a cause and effect can be established, cancer-related pollution sources in drinking water may produce a kind of negligence or damages suit. If a cancer link is clearly established to a given pollutant, those who have cancer in areas where the drinking waters have been polluted by that certain type of pollutant, which is the carcinogen, sooner or later will probably bring a lawsuit. The merits of the suit remain to be seen, and the problems of proof are monumental. Nonetheless, the risk should not be disregarded.

Other issues abound. What "secondary" standards will be imposed? Is the hardness or taste of the water a factor? Much study must be undertaken to determine if rules on these issues are to have the rational foundation which due process requires.

Preliminary studies by the U. S. Environmental Protection Agency show that the need for the Safe Drinking Water Act has not been exaggerated. The EPA announced on April 18, 1975, that the drinking water for 79 American cities was polluted with traces of organic chemicals.⁴³

Ultimately water costs will increase in order to underwrite the heightened demand to protect public health. In the Garden City Park Water District on Long Island, nitrate contamination exceeded Public Health Service limits and no new ground water supplies existed.⁴⁴ A new ion-exchange process was designed which removed nearly all the nitrate in the water at a treatment cost of 12.5¢ per 1,000 gallons. The family of four saw their monthly water bill increase 70¢, but the public's health was secured.⁴⁵

As with all environmental protection laws, safe drinking water will require close analysis of the real costs that now fall by chance on the recipients of pollution. The Safe Drinking Water Act presents many new rights and duties for large sectors of the public. Its implementation deserves and requires the active participation of the bar.

⁴² Reserve Mining v. United States, 7 E.R.C. 1618 (8th Cir. 1975).

⁴³ See H. M. Schmeck, Jr., Study Finds Chemical Pollution of Drinking Water in 79 Cities, *The New York Times*, April 19, 1975, p. 1, col. 1.

⁴⁴ Nitrate intake in infants leads to blue baby syndrome (infantile methemoglobinemia), a potentially fatal disease. The effect on adults is unclear. See CONSUMER REPORTS, August 1974.

⁴⁵ *Supra* note 44.