

ILLINOIS POLLUTION CONTROL BOARD
December 6, 2001

IN THE MATTER OF:)
)
PROPOSED MTBE AND COMPLIANCE) R01-14
DETERMINATION AMENDMENTS TO) (Rulemaking – Public Water Supply)
GROUNDWATER QUALITY STANDARDS:))
35 ILL. ADM. CODE 620)

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by N.J. Melas, C.A. Manning, R.C. Flegal)

On September 1, 2000, the Illinois Environmental Protection Agency (Agency) filed a proposal for rulemaking to amend the Board's Public Water Supply regulations at 35 Ill. Adm. Code 620. The proposed regulations would amend the Board's groundwater quality regulations to include methyl tertiary-butyl ether (MTBE). Specifically, the proposed regulations include a preventative response level in addition to Class I and Class II groundwater standards for MTBE. The proposed regulations would also clarify sampling procedures for certain existing drinking water supply wells.

By today's action, the Board proposes for second notice the Agency's proposed amendments (with minor modifications) pursuant to the Illinois Administrative Procedure Act (5 ILCS 100/1-1 *et seq.* (2000)) for consideration by the Joint Committee on Administrative Rules (JCAR).

PROCEDURAL HISTORY

Two public hearings were held in this matter before Board Hearing Officer Joel Sternstein, Board Members, and Board staff. The first hearing was held on March 1, 2001, in Springfield. The Agency, represented by Deputy Counsel Stephen C. Ewart, presented witnesses Richard P. Cobb, P.G., Manager of the Groundwater Section in the Agency's Bureau of Water, and Agency toxicologist Dr. Thomas C. Hornshaw. Agency witness Gary P. King appeared at the first hearing only. The second hearing was held on April 5, 2001, in Chicago where Mr. Cobb and Dr. Hornshaw testified again.

The Board issued its first notice opinion and order in this matter three months ago. *See Proposed MTBE and Compliance Determination Amendments to Groundwater Quality Standards: 35 Ill. Adm. Code 620, R01-14* (Sept. 6, 2001). On September 21, 2001, the proposed amendments were published in the *Illinois Register* at 25 Ill. Reg. 11973.

The Board received three public comments in this proceeding. The first public comment was from Professor Craig Curtis at Bradley University in Peoria. The second public comment was from the Agency. It provided amended proposed definitions of "licensed professional engineer" and "licensed professional geologist" in addition to a technical review of exhibits 12

and 13. The Agency stated that it has proposed definitions for “licensed professional engineer” and “licensed professional geologist” to match the definitions that it has proposed in dockets R01-26 and R01-27. *See* PC 2 at 2.¹ The third public comment (and the only one submitted during the first-notice period) was from the Agency. In the third public comment, the Agency said that it supported the Board’s decision to amend the definition of carcinogen at Part 620 of the Board’s regulations to match the definition at Section 58.2 of the Act. 415 ILCS 5/58.2 (2000); PC 3 at 2. The Agency also said that it supported the rest of the Board’s first notice opinion and order. PC 3 at 3.

DISCUSSION

The Board will provide a brief summary of MTBE’s properties, the Agency’s proposal, and the Board’s rationale behind its decision. The Board will also provide a summary of the amendments regarding sampling procedures for certain existing drinking water supply wells and discuss economic reasonableness. For a more detailed discussion of the proposed amendments, please refer to the Board’s first-notice opinion and order in this matter.

MTBE Properties

MTBE is a type of organic chemical known as an ether that has been widely used as an octane-enhancing additive to gasoline. Tr.1 at 12-13; Exh. 1 at 4; Stat. of Reas. at exh. 4 - pp. 1, 5. MTBE is very soluble in water, and, as a result, is readily transported by groundwater away from a spill or leak such as from an Underground Storage Tank. Tr.1 at 13-15; Exh. 1 at 5-6; Stat. of Reas. at 2-3. Some people can taste or smell MTBE in drinking water at concentrations as low as 20 to 40 parts per billion (ppb).² Tr.1 at 12, 51-52; Exh. 1 at 4; Exh. 13 at iii; Stat. of Reas. at exh. 4 – p. 2. Since 1994, 26 community water supplies (CWS) in Illinois have exhibited MTBE contamination in finished drinking water sampling results. Tr.1 at 11-12, 46; Exh. 1 at 1-3; Stat. of Reas. at 5.

The proposed MTBE groundwater standards will serve as a basis for amendments to other proposed regulations currently pending before the Board. *See* Proposed Amendments to Tiered Approach to Correction Action Objectives (TACO) (MTBE): 35 Ill. Adm. Code 742, R00-19(C).³

¹ The Agency’s statement of reasons will be cited as “Stat. of Reas. at ____;” the transcript from the March 1, 2001 hearing will be cited as “Tr.1 at ____;” the transcript for the April 5, 2001 hearing will be cited as “Tr.2 at ____;” the exhibits will be cited as “Exh. __ at ____;” and public comments will be cited as “PC __ at ____.”

² During the hearings and in the exhibits, levels of MTBE in water were expressed in different units. For the sake of consistency and readability, the Board has converted all MTBE measurements to parts per billion, even though regulatory language sets MTBE measurements in terms of milligrams per liter (mg/L). 1 ppb is equivalent to 0.001 mg/L.

³ The Board is proposing these TACO amendments for second notice today as well.

The Agency's Proposal

The Agency proposes the addition of an MTBE Class I Potable Resource Groundwater standard and an MTBE Class II General Resource Groundwater standard. The Agency proposes a standard of 70 ppb for both classes. 35 Ill. Adm. Code 620.410, 620.420. In addition, the Agency proposes a preventive response level for MTBE of 20 ppb. *See* 35 Ill. Adm. Code 620.310.

Mr. Cobb testified that the Class I standard of 70 ppb is based on a draft Agency health advisory (advisory) developed pursuant to 35 Ill. Adm. Code 620.605, and a review of other states' regulations. Mr. Cobb stated that the Class II standard is based on the capability of treatment technology to achieve the Class I standard. He noted that the Class II standard is also proposed at 70 ppb since treatment of MTBE is very difficult once it has dissolved into groundwater. Mr. Cobb also stated that the preventive response level for MTBE is based on its taste and odor threshold. Tr.1 at 23; Exh. 1 at 12; Stat. of Reas. at 6-7.

Rationale Behind The Board's Decision

The United States Environmental Protection Agency (USEPA) and various states have proposed or considered different MTBE standards for groundwater or drinking water. At the second hearing, the Board introduced two exhibits presenting positions from California and New Hampshire. Tr.2 at 45-47.

The Board's fundamental decision at first notice was whether to propose a standard based on non-carcinogenic or carcinogenic effects of MTBE. The Agency's proposal typifies a standard based on non-carcinogenic effects. The Agency chose not to use a carcinogenic endpoint as the basis for its proposal in part because it defers to the USEPA regarding the carcinogenic properties of MTBE, and partly because it has been faced with the need to make decisions in the absence of a USEPA position. Dr. Hornshaw noted that the Agency needed to come up with regulatory values because there had been detections of MTBE at CWS's across Illinois. Tr.1 at 42. The Board agreed with the Agency that Illinois does not have the luxury of waiting for a directive from USEPA when 26 CWS's have already shown signs of MTBE contamination.

The Agency assumes that USEPA will promulgate a standard based on cancer as an endpoint, even though it has yet to do so. A USEPA policy document on MTBE regulation indicates that it may take USEPA until the year 2010 or longer to promulgate a maximum contaminant level MCL for MTBE.⁴ Tr.2 at 49-50, 56-57.

⁴ *See* Rachel Sakata, *A Drinking Water Standard for MTBE? The Ifs and Whens of Establishing an MCL*, USEPA Office of Ground Water and Drinking Water, L.U.S.T. Line, Bulletin 33 (Oct. 1999) <http://www.epa.gov/swerust1/mtbe/mtbe_mcl.pdf>.

California has already set an MTBE standard based on carcinogenic effects, and the Agency noted that the California toxicologists' approach was "consistent with the guidelines published by USEPA for cancer risk assessment." PC 2 at 6.

The Board found that both the Agency's proposal and the California standard have been well-researched and carefully analyzed. However, the Board found that it would be more prudent to follow the Agency's proposal that is based on the non-carcinogenic effects of MTBE. The definition of "carcinogen" at Section 620.110 of the Board's regulations is limited to those compounds that USEPA has identified as carcinogens either through its Integrated Risk Information System (IRIS) or its rulemaking authority. USEPA has not identified MTBE as a carcinogen either in IRIS or by rulemaking.

The Board is using a similar rationale for determining groundwater standards in this docket as it is for determining cleanup standards in the R00-19(C) docket. The definition of carcinogen at Part 742 of the Board's regulations is broader than the definition at Section 620.110.

The definition of carcinogen at Part 742 is nearly identical to the definition at Section 58.2 of the Act:

"Carcinogen" means a contaminant that is classified as a Category A1 or A2 Carcinogen by the American Conference of Governmental Industrial Hygienists; or a Category 1 or 2A/2B carcinogen by the World Health Organization's International Agency for Research on Cancer; or a "Human carcinogen" or "Anticipated Human Carcinogen" by the United States Department of Health and Human Service National Toxicological Program; or a Category A or B1/B2 Carcinogen by the United States Environmental Protection Agency in Integrated Risk Information System or a Final Rule issued in a Federal Register notice by the USEPA.

The Board determined that neither USEPA or the other organizations listed in the definition have yet classified MTBE as a carcinogen. However, the Board will track them to see if they eventually determine that MTBE is a carcinogen. The Board may then propose revisions to these MTBE groundwater quality standards if MTBE is found to be a carcinogen.

For the sake of consistency with respect to regulatory compliance, the Board has proposed that the definition of carcinogen at Part 742 of the Board's regulations and at Section 58.2 of the Environmental Protection Act (Act) replace the existing definition at Part 620 of the Board's regulations. Since none of the organizations listed in the definition at Part 742 have yet classified MTBE as a carcinogen in accordance with the definition above, the Board's finding regarding the regulatory limits for MTBE in groundwater in this docket will not change.

The Board finds that the Agency properly proposed a level of 20 ppb MTBE as a trigger for preventative response activities at Section 620.310 of the Board's regulations. We agree with the Agency that the taste and odor threshold should serve as a basis for the 20 ppb trigger.

Protection for Drinking Water Supply Wells

The amendments also add criteria to further clarify conditions for drinking water supply wells that can be used to collect representative groundwater samples. The proposed amendments allow a licensed professional engineer or a licensed professional geologist to use adjacent geological information and well construction information common to sand point wells. Stat. of Reas. at 7.

The genesis behind the Agency's proposal at Section 602.505 is the appellate court case People v. Stonehedge, Inc., 288 Ill. App. 3d 318, 680 N.E.2d 497 (2d Dist. 1997). The appellate court did not allow the use of samples from drinking water supply wells for compliance determinations even though, the Agency claims, the drinking water wells were representative of the geology of the area.

The Agency's proposal expands the list of drinking water supply wells that can be used for compliance determinations. It includes wells that have geologic logs. It also includes wells in an affected area with a geologic log if the area is suitable as determined by a licensed professional geologist or licensed professional engineer.

The Agency's proposal also allows sand point wells to be used for compliance determinations under certain conditions delineated at 35 Ill. Adm. Code 620.505(a)(5)(C), and the Agency also has proposed limitations for the use of sand point wells at 35 Ill. Adm. Code 620.505(a)(6). Tr.2 at 34-35.

Economic Reasonableness

There were no comments on the decision of the Department of Commerce and Community Affairs not to perform an Economic Impact Statement for docket R01-14. Tr.2 at 9.

In the first-notice opinion and order, after reviewing the record, the Board determined that the costs of remediation for MTBE are quite significant. The Board balanced these considerations with the safety of drinking water supplies and the costs of changing water supplies if a water supply becomes contaminated. The Board places a very high value on the safety of drinking water supplies and finds that safety must be paramount in this matter. We also recognize that the costs of bringing a new water supply online for a community may be more expensive than remediating a contaminated water supply.

CONCLUSION

The Board finds that the Agency's proposal for MTBE groundwater regulatory limits has been well-researched and carefully analyzed based on MTBE's noncarcinogenic effects. We therefore propose an MTBE standard of 70 ppb (0.07mg/L) for Class I and Class II groundwater and a preventative response level of 20 ppb (0.02 mg/L) in Illinois for second notice. The Board also proposes changing the definition of "carcinogen" in Part 620 of the Board's regulations to match the definition of "carcinogen" at Part 742 of the Board's regulations.

We find merit with the Agency’s proposal regarding wells used in compliance determinations. The Board submits, for second notice, the Agency’s modifications for the regulations regarding wells used in compliance determinations. The Board replaces the Agency’s proposed definitions for “licensed professional engineer” and “licensed professional geologist” with the definitions of these terms that are already found respectively in the Act and the Professional Geologist Licensing Act.

The Board is also including nonsubstantive changes that the Joint Committee on Administrative Rules recommended during the first notice period.

ORDER

Within the text of the order, deletions proposed at first-notice are shown via strikeouts, and additions are underlined. Deletions pursuant to the second-notice process are shown via strikeouts and double underlines, while additions pursuant to the second-notice process are shown via double underlines.

The Board proposes for second-notice the following amendments to 35 Ill. Adm. Code 620. The Clerk of the Board is directed to file these proposed amendments with JCAR.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE F: PUBLIC WATER SUPPLIES
CHAPTER I: POLLUTION CONTROL BOARD

PART 620
GROUNDWATER QUALITY

SUBPART A: GENERAL

Section	
620.105	Purpose
620.110	Definitions
620.115	Prohibition
620.125	Incorporations by Reference
620.130	Exemption from General Use Standards and Public and Food Processing Water Supply Standards
620.135	Exclusion for Underground Waters <u>Water</u> in Certain Man-Made Conduits

SUBPART B: GROUNDWATER CLASSIFICATION

Section	
620.201	Groundwater Designations
620.210	Class I: Potable Resource Groundwater
620.220	Class II: General Resource Groundwater
620.230	Class III: Special Resource Groundwater
620.240	Class IV: Other Groundwater
620.250	Groundwater Management Zone
620.260	Reclassification of Groundwater by Adjusted Standard

SUBPART C: NONDEGRADATION PROVISIONS FOR APPROPRIATE GROUNDWATERS

Section	
620.301	General Prohibition Against Use Impairment of Resource Groundwater
620.302	Applicability of Preventive Notification and Preventive Response Activities
620.305	Preventive Notification Procedures
620.310	Preventive Response Activities

SUBPART D: GROUNDWATER QUALITY STANDARDS

Section	
620.401	Applicability
620.405	General Prohibitions Against Violations of Groundwater Quality Standards
620.410	Groundwater Quality Standards for Class I: Potable Resource Groundwater
620.420	Groundwater Quality Standards for Class II: General Resource Groundwater
620.430	Groundwater Quality Standards for Class III: Special Resource Groundwater
620.440	Groundwater Quality Standards for Class IV: Other Groundwater
620.450	Alternative Groundwater Quality Standards

SUBPART E: GROUNDWATER MONITORING AND ANALYTICAL PROCEDURES

Section	
620.505	Compliance Determination
620.510	Monitoring and Analytical Requirements

SUBPART F: HEALTH ADVISORIES

Section	
620.601	Purpose of a Health Advisory
620.605	Issuance of a Health Advisory
620.610	Publishing Health Advisories
620.615	Additional Health Advice for Mixtures of Similar-Acting Substances
Appendix A	Procedures for Determining Human Threshold Toxicant Advisory Concentration for Class I: Potable Resource Groundwater
Appendix B	Procedures for Determining Hazard Indices for Class I: Potable Resource Groundwater for Mixtures of Similar-Acting Substances
Appendix C	Guidelines for Determining When Dose Addition of Similar-Acting Substances in Class I: Potable Resource Groundwaters is Appropriate
Appendix D	Confirmation of an Adequate Corrective Action Pursuant to 35 Ill. Adm.

Code 620.250(a)(2)

AUTHORITY: Implementing and authorized by Section 8 of the Illinois Groundwater Protection Act [415 ILCS 55/8] and authorized by Section 27 of the Illinois Environmental Protection Act [415 ILCS 5/27].

SOURCE: Adopted in R89-14(B) at 15 Ill. Reg. 17614, effective November 25, 1991; amended in R89-14(C) at 16 Ill. Reg. 14667, effective September 11, 1992; amended at 18 Ill. Reg. 14084, effective August 24, 1994; amended in R96-10 at 21 Ill. Reg. 6518, effective May 8, 1997; amended in R97-11 at 21 Ill. Reg. 7869, effective July 1, 1997; amended in R01-14 at 26 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL

Section 620.110 Definitions

The definitions of the Environmental Protection Act [415 ILCS 5] and the Groundwater Protection Act [415 ILCS 55] apply to this Part. The following definitions also apply to this Part.

"Act" means the Environmental Protection Act [415 ILCS 5].

"Agency" means the Illinois Environmental Protection Agency.

~~"AQUIFER" MEANS SATURATED (WITH GROUNDWATER) SOILS AND GEOLOGIC MATERIALS WHICH ARE SUFFICIENTLY PERMEABLE TO READILY YIELD ECONOMICALLY USEFUL QUANTITIES OF WATER TO WELLS, SPRINGS, OR STREAMS UNDER ORDINARY HYDRAULIC GRADIENTS.~~ *"Aquifer" means saturated (with groundwater) soils and geologic materials which are sufficiently permeable to readily yield economically useful quantities of water to wells, springs, or streams under ordinary hydraulic gradients.* [415 ILCS 55/3(b)]~~(Section 3(b) of the IGPA).~~

"BETX" means the sum of the concentrations of benzene, ethylbenzene, toluene, and xylenes.

"Board" means the Illinois Pollution Control Board.

~~"Carcinogen" means a chemical, or complex mixture of closely related chemicals, that which has been listed or classified in the Integrated Risk Information System or as specified in a final rule adopted by USEPA in accordance with USEPA Guidelines for Carcinogenic Risk Assessment, incorporated by reference at Section 620.125, to be a group A, B₁, or B₂ carcinogen.~~ *"Carcinogen" means a contaminant that is classified as a Category A1 or A2 Carcinogen by the American Conference of*

Governmental Industrial Hygienists; or a Category 1 or 2A/2B carcinogen by the World Health Organization's International Agency for Research on Cancer; or a "Human carcinogen" or "Anticipated Human Carcinogen" by the United States Department of Health and Human Service National Toxicological Program; or a Category A or B1/B2 Carcinogen by the United States Environmental Protection Agency in Integrated Risk Information System or a Final Rule issued in a Federal Register notice by the USEPA. [415 ILCS 5/58.2]

~~"COMMUNITY WATER SUPPLY" MEANS A PUBLIC SUPPLY WHICH SERVES OR IS INTENDED TO SERVE AT LEAST 15 SERVICE CONNECTIONS USED BY RESIDENTS OR REGULARLY SERVES AT LEAST 25 RESIDENTS~~ *"Community water supply" means a public supply which serves or is intended to serve at least 15 service connections used by residents or regularly serves at least 25 residents.*
[415 ILCS 5/3.05](Section 3.05 of the Act)

~~"CONTAMINANT" MEANS ANY SOLID, LIQUID, OR GASEOUS MATTER, ANY ODOR, OR ANY FORM OF ENERGY, FROM WHATEVER SOURCE~~ *"Contaminant" means any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source.*
[415 ILCS 5/3.06](Section 3.06 of the Act)

"Corrective action process" means those procedures and practices that may be imposed by a regulatory agency when a determination has been made that contamination of groundwater has taken place, and are necessary to address a potential or existing violation of the standards set forth in Subpart D.

"Cumulative impact area" means the area, including the coal mine area permitted under the Surface Coal Mining Land Conservation and Reclamation Act [225 ILCS 720] and 62 Ill. Adm. Code 1700 through 1850, within which impacts resulting from the proposed operation may interact with the impacts of all anticipated mining on surface water and groundwater systems.

"Department" means the Illinois Department of Natural Resources.

"Detection" means the identification of a contaminant in a sample at a value equal to or greater than the:

"Method Detection Limit" or "MDL" ~~that~~ ^{which} means the minimum concentration of a substance that can be measured as reported with 99 percent confidence that the true value is greater than zero, pursuant to 56 Fed. Reg. 3526-3597, incorporated by reference at Section 620.125; or

"Method Quantitation Limit" or "MQL" ~~that which~~ means the minimum concentration of a substance that can be measured and reported pursuant to "Test Methods for Evaluating Solid Wastes, Physical/ Chemical Methods", incorporated by reference at Section 620.125.

"Department" means the Illinois Department of Energy and Natural Resources.

~~"GROUNDWATER" MEANS UNDERGROUND WATER WHICH OCCURS WITHIN THE SATURATED ZONE AND GEOLOGIC MATERIALS WHERE THE FLUID PRESSURE IN THE PORE SPACE IS EQUAL TO OR GREATER THAN ATMOSPHERIC PRESSURE.~~ *"Groundwater" means underground water which occurs within the saturated zone and geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure.* [415 ILCS 5/3.64] ~~(Section 3.64 of the Act)~~

"Hydrologic balance" means the relationship between the quality and quantity of water inflow to, water outflow from, and water storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake, or reservoir. It encompasses the dynamic relationships among precipitation, runoff, evaporation, and changes in ground and surface water storage.

"IGPA" means the Illinois Groundwater Protection Act. [415 ILCS 55]

"LOAEL" or "Lowest observable adverse effect level" means the lowest tested concentration of a chemical or substance ~~that which~~ produces a statistically significant increase in frequency or severity of non-overt adverse effects between the exposed population and its appropriate control. LOAEL may be determined for a human population (LOAEL-H) or an animal population; (LOAEL-A);

"Licensed Professional Engineer" or "LPE" means a person, corporation, or partnership licensed under the laws of the State of Illinois to practice professional engineering. [415 ILCS 5/57.2]

"Licensed Professional Geologist" or "LPG" means an individual who is licensed under the Professional Geologist Licensing Act to engage in the practice of professional geology in Illinois. (Professional Geologist Licensing Act [225 ILCS 745/15])

"NOAEL" or "No observable adverse effect level" means the highest tested concentration of a chemical or substance ~~that which~~ does not produce a statistically significant increase in frequency or severity of non-overt adverse effects between the exposed population and its appropriate

control. NOAEL may be determined for a human population (NOAEL-H) or an animal population (NOAEL-A).₂

~~"NON-COMMUNITY WATER SUPPLY" MEANS A PUBLIC WATER SUPPLY THAT IS NOT A COMMUNITY WATER SUPPLY~~ *"Non-community water supply" means a public water supply that is not a community water supply. [415 ILCS 5/3.05](Section 3.05)*

"Off-site" means not on-site.

"On-site" means on the same or geographically contiguous property ~~that~~^{which} may be divided by public or private right-of-way, provided the entrance and exit between properties is at a crossroads intersection and access is by crossing as opposed to going along the right-of-way. Noncontiguous properties owned by the same person but connected by a right-of-way ~~that~~^{which} he controls and ~~that~~^{to which} the public does not have access to is also considered on-site property.

"Operator" means the person responsible for the operation of a site, facility or unit. "Owner" means the person who owns a site, facility or unit or part of a site, facility or unit, or who owns the land on which the site, facility or unit is located.

~~"POTABLE" MEANS GENERALLY FIT FOR HUMAN CONSUMPTION IN ACCORDANCE WITH ACCEPTED WATER SUPPLY PRINCIPLES AND PRACTICES~~ *"Potable" means generally fit for human consumption in accordance with accepted water supply principles and practices. [415 ILCS 5/3.65](Section 3.65 of the Act)*

~~"POTENTIAL PRIMARY SOURCE" MEANS ANY UNIT AT A FACILITY OR SITE NOT CURRENTLY SUBJECT TO A REMOVAL OR REMEDIAL ACTION WHICH:~~

"Potential primary source" means any unit at a facility or site not currently subject to a removal or remedial action which:

~~IS UTILIZED FOR THE TREATMENT, STORAGE, OR DISPOSAL OF ANY HAZARDOUS OR SPECIAL WASTE NOT GENERATED AT THE SITE; OR
IS UTILIZED FOR THE DISPOSAL OF MUNICIPAL WASTE NOT GENERATED AT THE SITE, OTHER THAN LANDSCAPE WASTE AND CONSTRUCTION AND DEMOLITION DEBRIS; OR
IS UTILIZED FOR THE LANDFILLING, LAND TREATING, SURFACE IMPOUNDING OR PILING OF ANY HAZARDOUS OR SPECIAL WASTE THAT IS GENERATED ON THE SITE OR AT OTHER SITES OWNED, CONTROLLED OR~~

~~OPERATED BY THE SAME PERSON; OR STORES OR ACCUMULATES AT ANY TIME MORE THAN 75,000 POUNDS ABOVE GROUND, OR MORE THAN 7,500 POUNDS BELOW GROUND, OF ANY HAZARDOUS SUBSTANCES~~

is utilized for the treatment, storage, or disposal of any hazardous or special waste not generated at the site; or

is utilized for the disposal of municipal waste not generated at the site, other than landscape waste and construction and demolition debris; or

is utilized for the landfilling, land treating, surface impounding or piling of any hazardous or special waste that is generated on the site or at other sites owned, controlled or operated by the same person; or

stores or accumulates at any time more than 75,000 pounds above ground, or more than 7,500 pounds below ground, of any hazardous substances. [415 ILCS 5/3.59](Section 3.59 of the Act)

~~"POTENTIAL ROUTE" MEANS ABANDONED AND IMPROPERLY PLUGGED WELLS OF ALL KINDS, DRAINAGE WELLS, ALL INJECTION WELLS, INCLUDING CLOSED LOOP HEAT PUMP WELLS, AND ANY EXCAVATION FOR THE DISCOVERY, DEVELOPMENT OR PRODUCTION OF STONE, SAND OR GRAVEL~~ *"Potential route" means abandoned and improperly plugged wells of all kinds, drainage wells, all injection wells, including closed loop heat pump wells, and any excavation for the discovery, development or production of stone, sand or gravel. [415 ILCS 5/3.58](Section 3.58 of the Act)*

~~"POTENTIAL SECONDARY SOURCE" MEANS ANY UNIT AT A FACILITY OR A SITE NOT CURRENTLY SUBJECT TO A REMOVAL OR REMEDIAL ACTION, OTHER THAN A POTENTIAL PRIMARY SOURCE, WHICH:~~

"Potential secondary source" means any unit at a facility or a site not currently subject to a removal or remedial action, other than a potential primary source, which:

~~IS UTILIZED FOR THE LANDFILLING, LAND TREATING, OR SURFACE IMPOUNDING OF WASTE THAT IS GENERATED ON THE SITE OR AT OTHER SITES OWNED, CONTROLLED OR OPERATED BY THE SAME PERSON, OTHER THAN LIVESTOCK AND LANDSCAPE WASTE, AND CONSTRUCTION AND DEMOLITION DEBRIS; OR STORES OR ACCUMULATES AT ANY TIME MORE THAN 25,000 BUT NOT MORE THAN 75,000 POUNDS ABOVE GROUND, OR MORE THAN 2,500 BUT NOT MORE THAN~~

~~7,500 POUNDS BELOW GROUND, OF ANY HAZARDOUS SUBSTANCE; OR STORES OR ACCUMULATES AT ANY TIME MORE THAN 25,000 GALLONS ABOVE GROUND, OR MORE THAN 500 GALLONS BELOW GROUND, OF PETROLEUM, INCLUDING CRUDE OIL OR ANY FRACTION THEREOF WHICH IS NOT OTHERWISE SPECIFICALLY LISTED OR DESIGNATED AS A HAZARDOUS SUBSTANCE; OR STORES OR ACCUMULATES PESTICIDES, FERTILIZERS, OR ROAD OILS FOR PURPOSES OF COMMERCIAL APPLICATION OR FOR DISTRIBUTION TO RETAIL SALES OUTLETS; OR STORES OR ACCUMULATES AT ANY TIME MORE THAN 50,000 POUNDS OF ANY DE-ICING AGENT; OR IS UTILIZED FOR HANDLING LIVESTOCK WASTE OR FOR TREATING DOMESTIC WASTEWATERS OTHER THAN PRIVATE SEWAGE DISPOSAL SYSTEMS AS DEFINED IN THE PRIVATE SEWAGE DISPOSAL LICENSING ACT~~
is utilized for the landfilling, land treating, or surface impounding of waste that is generated on the site or at other sites owned, controlled or operated by the same person, other than livestock and landscape waste, and construction and demolition debris; or stores or accumulates at any time more than 25,000 but not more than 75,000 pounds above ground, or more than 2,500 but not more than 7,500 pounds below ground, of any hazardous substance; or
stores or accumulates at any time more than 25,000 gallons above ground, or more than 500 gallons below ground, of petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance; or stores or accumulates pesticides, fertilizers, or road oils for purposes of commercial application or for distribution to retail sales outlets; or
stores or accumulates at any time more than 50,000 pounds of any de-icing agent; or
is utilized for handling livestock waste or for treating domestic wastewaters other than private sewage disposal systems as defined in the Private Sewage Disposal Licensing Act [225 ILCS 225].
[415 ILCS 5/3.60]

"Practical Quantitation Limit" or "PQL" means the lowest concentration or level that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions in accordance with "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846, incorporated by reference at Section 620.125.

"Previously mined area" means land disturbed or affected by coal mining operations prior to February 1, 1983.

~~(Board Note~~BOARD NOTE: February 1, 1983, is the effective date of the Illinois permanent program regulations implementing the Surface Coal Mining Land Conservation and Reclamation Act [225 ILCS 720] as codified in 62 Ill. Adm. Code 1700 through 1850.)

"Property class" means the class assigned by a tax assessor to real property for purposes of real estate taxes.

~~(Board Note~~BOARD NOTE: The property class ~~[(rural property, residential vacant land, residential with dwelling, commercial residence, commercial business, commercial office, or industrial)]~~ is identified on the property record card maintained by the tax assessor in accordance with the Illinois Real Property Appraisal Manual ~~[(February 1987)]~~, published by the Illinois Department of Revenue, Property Tax Administration Bureau.)

~~"PUBLIC WATER SUPPLY" MEANS ALL MAINS, PIPES AND STRUCTURES THROUGH WHICH WATER IS OBTAINED AND DISTRIBUTED TO THE PUBLIC, INCLUDING WELLS AND WELL STRUCTURES, INTAKES AND CRIBS, PUMPING STATIONS, TREATMENT PLANTS, RESERVOIRS, STORAGE TANKS AND APPURTENANCES, COLLECTIVELY OR SEVERALLY, ACTUALLY USED OR INTENDED FOR USE FOR THE PURPOSE OF FURNISHING WATER FOR DRINKING OR GENERAL DOMESTIC USE AND WHICH SERVE AT LEAST 15 SERVICE CONNECTIONS OR WHICH REGULARLY SERVE AT LEAST 25 PERSONS AT LEAST 60 DAYS PER YEAR. A PUBLIC WATER SUPPLY IS EITHER A "COMMUNITY WATER SUPPLY" OR A "NON-COMMUNITY WATER SUPPLY".~~
"Public water supply" means all mains, pipes and structures through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use and which serve at least 15 service connections or which regularly serve at least 25 persons at least 60 days per year. A public water supply is either a "community water supply" or a "non-community water supply".
 [415 ILCS 5/3.28](Section 3.28 of the Act)

"Regulated entity" means a facility or unit regulated for groundwater protection by any ~~state~~State or federal agency.

"Regulatory agency" means the Illinois Environmental Protection Agency,

Department of Public Health, Department of Agriculture, ~~Department~~the Office of Mines and Minerals in the Department of Natural Resources, and the Office of State Fire Marshal.

~~"REGULATED RECHARGE AREA" MEANS A COMPACT GEOGRAPHIC AREA, AS DETERMINED BY THE BOARD~~
~~"Regulated recharge area" means a compact geographic area, as determined by the Board~~ pursuant to Section 17.4 of the Act,~~THE GEOLOGY OF WHICH RENDERS A POTABLE RESOURCE GROUNDWATER PARTICULARLY SUSCEPTIBLE TO CONTAMINATION~~
the geology of which renders a potable resource groundwater particularly susceptible to contamination. [415 ILCS 5/3.67](~~Section 3.67 of the Act~~)

~~"RESOURCE GROUNDWATER" MEANS GROUNDWATER THAT IS PRESENTLY BEING, OR IN THE FUTURE IS CAPABLE OF BEING, PUT TO BENEFICIAL USE BY REASON OF BEING OF SUITABLE QUALITY~~
"Resource groundwater" means groundwater that is presently being, or in the future is capable of being, put to beneficial use by reason of being of suitable quality. [415 ILCS 5/3.66](~~Section 3.66 of the Act~~)

~~"SETBACK ZONE" MEANS A GEOGRAPHIC AREA, DESIGNATED PURSUANT TO THIS ACT, CONTAINING A POTABLE WATER SUPPLY WELL OR A POTENTIAL SOURCE OR POTENTIAL ROUTE HAVING A CONTINUOUS BOUNDARY, AND WITHIN WHICH CERTAIN PROHIBITIONS OR REGULATIONS ARE APPLICABLE IN ORDER TO PROTECT GROUNDWATERS~~
"Setback zone" means a geographic area, designated pursuant to this Act, containing a potable water supply well or a potential source or potential route having a continuous boundary, and within which certain prohibitions or regulations are applicable in order to protect groundwaters. [415 ILCS 5/3.61](~~Section 3.61 of the Act~~)

~~"SITE" MEANS ANY LOCATION, PLACE, TRACT OF LAND AND FACILITIES, INCLUDING BUT NOT LIMITED TO, BUILDINGS AND IMPROVEMENTS USED FOR THE PURPOSES SUBJECT TO REGULATION OR CONTROL BY THE ACT OR REGULATIONS THEREUNDER~~
"Site" means any location, place, tract of land and facilities, including but not limited to, buildings and improvements used for the purposes subject to regulation or control by the Act or regulations thereunder. [415 ILCS 5/3.43](~~Section 3.43 of the Act~~)

"Spring" means a natural surface discharge of an aquifer from rock or soil.

"Threshold dose" means the lowest dose of a chemical at which a specified measurable effect is observed and below which it is not observed.

"Treatment" means the technology, treatment techniques, or other procedures for compliance with 35 Ill. Adm. Code, Subtitle F.

~~"UNIT" MEANS ANY DEVICE, MECHANISM, EQUIPMENT, OR AREA (EXCLUSIVE OF LAND UTILIZED ONLY FOR AGRICULTURAL PRODUCTION)~~ *"Unit" means any device, mechanism, equipment, or area (exclusive of land utilized only for agricultural production).* [415 ILCS 5/3.62] ~~(Section 3.62 of the Act)~~

"USEPA" means the United States Environmental Protection Agency.

(Source: Amended at 26 Ill. Reg. _____, effective _____)

SUBPART C: NONDEGRADATION PROVISIONS FOR APPROPRIATE GROUNDWATERS

Section 620.310 Preventive Response Activities

- a) The following preventive assessment must be undertaken:
 - 1) If a preventive notification under Section 620.305(c) is provided by a community water supply:
 - A) The Agency shall notify the owner or operator of any identified potential primary source, potential secondary source, potential route, or community water supply well that is located within 2,500 feet of the wellhead.
 - B) The owner or operator notified under subsection (a)(1)(A) shall, within 30 days ~~after~~ the date of issuance of such notice, sample each water well or monitoring well for the contaminant identified in the notice if the contaminant or material containing such contaminant is or has been stored, disposed of, or otherwise handled at the site. If a contaminant identified under Section 620.305(a) is detected, then the well must be resampled within 30 days of the date on which the first sample analyses are received. If a contaminant identified under Section 620.305(a) is detected by the resampling, preventive notification must be given as set forth in Section 620.305.
 - C) If the Agency receives analytical results under subsection (a)(1)(B) that show a contaminant identified under Section 620.305(a) has been detected, the Agency shall:

- i) Conduct a well site survey pursuant to 415 ILCS 5/17.1(d)~~Section 17.1(d) of the Act~~, if such a survey has not been previously conducted within the last 5 years; and
 - ii) Identify those sites or activities ~~that~~which represent a hazard to the continued availability of groundwaters for public use unless a groundwater protection needs assessment has been prepared pursuant to 415 ILCS 5/17.1(d)~~Section 17.1 of the Act~~.
- 2) If a preventive notification is provided under Section 620.305(c) by a non-community water supply or for multiple private water supply wells, the Department of Public Health shall conduct a sanitary survey within 1,000 feet of the wellhead of a non-community water supply or within 500 feet of the wellheads for multiple private water supply wells.
- 3) If a preventive notification under Section 620.305(b) is provided by the owner or operator of a regulated entity and the applicable standard in Subpart D has not been exceeded:

A) The appropriate regulatory agency shall determine if any of the following occurs for Class I: Potable Resource Groundwater:

- i) The levels set forth below are exceeded or are changed for pH:

Constituent	Criteria (mg/L)
para-Dichlorobenzene	0.005
ortho-Dichlorobenzene	0.01
Ethylbenzene	0.03
<u>Methyl Tertiary-Butyl Ether</u>	<u>0.02</u>
Phenols	0.001
Styrene	0.01
Toluene	0.04
Xylenes	0.02

- ii) A statistically significant increase occurs above background (as determined pursuant to other regulatory procedures (e.g., 35 Ill. Adm. Code 616, 724, 725 or 811)) for arsenic, beryllium, cadmium, chromium, cyanide, lead, ~~or~~ mercury or thallium (except due to natural causes); or for aldicarb, atrazine, carbofuran, dalapon, dinoseb, endrin, endothall, hexachlorocyclopentadiene, lindane (gamma-hexachloro cyclohexane), 2,4-D, 1, 1 - dichloroethylene, cis - 1, 2 - dichloroethylene, trans-1,2-dichloroethylene,

methoxychlor, monochlorobenzene, picloram, simazine, 2,4,5-TP (Silvex), 1,2,4-trichloro- benzene, 1,1,2-trichloroethane, and 1, 1, 1 - trichloroethane.

- iii) For a chemical constituent of gasoline, diesel fuel, or heating fuel, the ~~constituent~~constituent exceeds the following:

Constituent	Criterion (mg/L)
BETX	0.095

- iv) For pH, a statistically significant change occurs from background.

~~(Board Note)~~BOARD NOTE: Constituents that are carcinogens have not been listed in subsection (a)(3)(A) because the standard is set at the PQL and any exceedence thereof is a violation subject to corrective action.

- B) The appropriate agency shall determine if, for Class III: Special Resource Groundwater, the levels as determined by the Board are exceeded.
- C) The appropriate regulatory agency shall consider whether the owner or operator reasonably demonstrates that:
- i) The contamination is a result of contaminants remaining in groundwater from a prior release for which appropriate action was taken in accordance with laws and regulations in existence at the time of the release;
 - ii) The source of contamination is not due to the on-site release of contaminants; or
 - iii) The detection resulted from error in sampling, analysis, or evaluation.
- D) The appropriate regulatory agency shall consider actions necessary to minimize the degree and extent of contamination.
- b) The appropriate regulatory agency shall determine whether a preventive response must be undertaken based on relevant factors including, but not limited to, the considerations in subsection (a)(3).
- c) After completion of preventive response pursuant to authority of an appropriate regulatory agency, the concentration of a contaminant listed in subsection

(a)(3)(A) in groundwater may exceed 50 percent of the applicable numerical standard in Subpart D only if the following conditions are met:

- 1) The exceedence has been minimized to the extent practicable;
 - 2) Beneficial use, as appropriate for the class of groundwater, has been assured; and
 - 3) Any threat to public health or the environment has been minimized.
- d) Nothing in this Section shall in any way limit the authority of the State or of the United States to require or perform any corrective action process.

(Source: Amended at __ Ill. Reg. _____, effective _____)

SUBPART D: GROUNDWATER QUALITY STANDARDS

Section 620.410 Groundwater Quality Standards for Class I: Potable Resource Groundwater

- a) Inorganic Chemical Constituents
Except due to natural causes or as provided in Section 620.450, concentrations of the following chemical constituents must not be exceeded in Class I groundwater:

Constituent	Units	Standard
Antimony	mg/L	0.006
Arsenic	mg/L	0.05
Barium	mg/L	<u>2.0</u>
Beryllium	mg/L	0.004
Boron	mg/L	<u>2.0</u>
Cadmium	mg/L	0.005
Chloride	mg/L	<u>200.0</u>
Chromium	mg/L	0.1
Cobalt	mg/L	<u>1.0</u>
Copper	mg/L	0.65
Cyanide	mg/L	0.2
Fluoride	mg/L	4.0
Iron	mg/L	<u>5.0</u>
Lead	mg/L	0.0075
Manganese Manganese	mg/L	0.15
<u>e</u>		
Mercury	mg/L	0.002
Nickel	mg/L	0.1
Nitrate as N	mg/L	<u>10.0</u>
Radium-226	pCi/l	<u>20.0</u>

Radium-228	pCi/l	20.0
Selenium	mg/L	0.05
Silver	mg/L	0.05
Sulfate	mg/L	400.0
Thallium	mg/L	0.002
Total Dissolved Solids (TDS)	mg/L	1,200
Zinc	mg/L	5.0

- b) Organic Chemical Constituents
 Except due to natural causes or as provided in Section 620.450 or subsection (c), concentrations of the following organic chemical constituents shall not be exceeded in Class I groundwater:

Constituent	Standard (mg/L)
Alachlor*	0.002
Aldicarb	0.003
Atrazine	0.003
Benzene*	0.005
Benzo(a)pyrene*	0.0002
Carbofuran	0.04
Carbon Tetrachloride*	0.005
Chlordane*	0.002
Dalapon	0.2
Dichloromethane*	0.005
Di(2-ethylhexyl)phthalate*	0.006
Dinoseb	0.007
Endothall	0.1
Endrin	0.002
Ethylene Dibromide*	0.00005
Heptachlor*	0.0004
Heptachlor Epoxide*	0.0002
Hexachlorocyclopentadiene	0.05
Lindane (Gamma-Hexachlorocyclohexane)	0.0002
2,4-D	0.07
ortho-Dichlorobenzene	0.6
para-Dichlorobenzene	0.075
1,2-Dibromo-3-Chloropropane*	0.0002
1,2-Dichloroethane*	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
1,2-Dichloropropane*	0.005
Ethylbenzene	0.7

Methoxychlor	0.04
<u>Methyl Tertiary-Butyl Ether</u>	<u>0.07</u>
Monochlorobenzene	0.1
Pentachlorophenol*	0.001
Phenols	0.1
Picloram	0.5
Polychlorinated	0.0005
Biphenyls(<u>PCB's</u> PCBs)(as decachloro- biphenyl)*	
Simazine	0.004
Styrene	0.1
2,4,5-TP (Silvex)	0.05
Tetrachloroethylene*	0.005
Toluene	<u>1.0</u>
Toxaphene*	0.003
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
1,2,4-Trichlorobenzene	0.07
Trichloroethylene*	0.005
Vinyl Chloride*	0.002
Xylenes	<u>10.0</u>

*Denotes a carcinogen.

- c) Complex Organic Chemical Mixtures
Concentrations of the following chemical ~~constituents~~constituents of gasoline, diesel fuel, or heating fuel must not be exceeded in Class I groundwater:

Constituent	Standard (mg/L)
Benzene*	0.005
BETX	11.705

*Denotes a carcinogen.

- d) pH
Except due to natural causes, a pH range of 6.5 - 9.0 units must not be exceeded in Class I groundwater.
- e) Beta Particle and Photon Radioactivity
- 1) Except due to natural causes, the average annual concentration of beta particle and photon radioactivity from man-made radionuclides shall not exceed a dose equivalent to the total body organ greater than 4 mrem/year in Class I groundwater. If two or more radionuclides are present, the sum

of their dose equivalent to the total body, or to any internal organ shall not exceed 4 mrem/year in Class I groundwater except due to natural causes.

- 2) Except for the radionuclides listed in subsection (e)(3), the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalent must be calculated on the basis of a 2 liter per day drinking water intake using the 168-hour data in accordance with the procedure set forth in NCRP Report Number 22, incorporated by reference at ~~in~~ Section 620.125(a).
- 3) Except due to natural causes, the average annual concentration assumed to produce a total body or organ dose of 4 mrem/year of the following chemical constituents shall not be exceeded in Class I groundwater:

Constituent	Critical Organ	Standard (<u>Pci/4pCi/L</u>)
Tritium	Total body	20,000 <u>.0</u>
Strontium-90	Bone marrow	8 <u>.0</u>

(Source: Amended at 26 Ill. Reg. _____, effective _____)

Section 620.420 Groundwater Quality Standards for Class II: General Resource Groundwater

a) Inorganic Chemical Constituents

- 1) Except due to natural causes or as provided in Section 620.450 or subsection (a)(3) or (d) of this Section, concentrations of the following chemical constituents must not be exceeded in Class II groundwater:

<u>Constituent</u>	<u>Standard</u> (mg/L)
Antimony	0.024
Arsenic	0.2
Barium	<u>2.0</u>
Beryllium	0.5
Cadmium	0.05
Chromium	<u>1.0</u>
Cobalt	<u>1.0</u>
Cyanide	0.6
Fluoride	4.0
Lead	0.1
Mercury	0.01
Nitrate as N	100 <u>.0</u>

Thallium 0.02

- 2) Except as provided in Section 620.450 or subsection (a)(3) or (d) of this Section, concentrations of the following chemical constituents must not be exceeded in Class II groundwater:

<u>Constituent</u>	<u>Standard</u> (mg/L)
Boron	2.0
Chloride	200.0
Copper	0.65
Iron	5.0
Manganese	10.0
Nickel	2.0
Selenium	0.05
Total Dissolved Solids (TDS)	1,200.0
Sulfate	400.0
Zinc	10.0

- 3) The standard for any inorganic chemical constituent listed in subsection (a)(2) of this Section, for barium, or for pH does not apply to groundwater within fill material or within the upper 10 feet of parent material under such fill material on a site not within the rural property class for which:

- A) Prior to November 25, 1991~~the effective date of this Part~~, surficial characteristics have been altered by the placement of such fill material so as to impact the concentration of the parameters listed in subsection (a)(3) of this Section, and any on-site groundwater monitoring of such parameters is available for review by the Agency.
- B) On the November 25, 1991~~the effective date of this Part~~, surficial characteristics are in the process of being altered by the placement of such fill material, ~~that~~which proceeds in a reasonably continuous manner to completion, so as to impact the concentration of the parameters listed in subsection (a)(3) of this Section, and any on-site groundwater monitoring of such parameters is available for review by the Agency.

- 4) For purposes of subsection (a)(3) of this Section, the term "fill material" means clean earthen materials, slag, ash, clean demolition debris, or other similar materials.

- b) Organic Chemical Constituents

- 1) Except due to natural causes or as provided in Section 620.450 or subsection (b)(2) or (d) of this Section, concentrations of the following organic chemical constituents must not be exceeded in Class II groundwater:

<u>Constituent</u>	<u>Standard</u> (mg/L)
Alachlor*	0.010
Aldicarb	0.015
Atrazine	0.015
Benzene*	0.025
Benzo(a)pyrene*	0.002
Carbofuran	0.2
Carbon Tetrachloride*	0.025
Chlordane*	0.01
Dalapon	2.0
Dichloromethane*	0.05
Di(2-ethylhexyl)phthalate*	0.06
Dinoseb	0.07
Endothall	0.1
Endrin	0.01
Ethylene Dibromide*	0.0005
Heptachlor*	0.002
Heptachlor Epoxide*	0.001
Hexachlorocyclopentadiene	0.5
Lindane (Gamma-Hexachloro cyclohexane)	0.001
2,4-D	0.35
Ortho-Dichlorobenze	1.5
Para-Dichlorobenzene	0.375
1,2-Dibromo-3-Chloropropane*	0.002
1,2-Dichloroethane*	0.025
1,1-Dichloroethylene	0.035
cis-1,2-Dichloroethylene	0.2
Trans-1,2-Dichloroethylene	0.5
1,2-Dichloropropane*	0.025
Ethylbenzene	1.0
Methoxychlor	0.2
<u>Methyl Tertiary-Butyl Ether (MTBE)</u>	<u>0.07</u>
Monochlorobenzene	0.5
Pentachlorophenol*	0.005
Phenols	0.1
Picloram	5.0
Polychlorinated Biphenyls (<u>PCB's</u> PCBs)	

(as decachloro-biphenyl)*	0.0025
Simazine	0.04
Styrene	0.5
2,4,5-TP	0.25
Tetrachloroethylene*	0.025
Toluene	2.5
Toxaphene*	0.015
1,1,1-Trichloroethane	1.0
1,2,4-Trichlorobenzene	0.7
1,1,2-Trichloroethane	0.05
Trichloroethylene*	0.025
Vinyl Chloride*	0.01
Xylenes	10.0

*Denotes a carcinogen.

2) The standards for pesticide chemical constituents listed in subsection (b)(1) of this Section do not apply to groundwater within 10 feet of the land surface, provided that the concentrations of such constituents result from the application of pesticides in a manner consistent with the requirements of the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. 136 et seq.) and the Illinois Pesticide Act [415 ILCS 60].

c) Complex Organic Chemical Mixtures

Concentrations of the following organic chemical constituents of gasoline, diesel fuel, or heating fuel must not be exceeded in Class II groundwater:

<u>Constituent</u>	<u>Standard</u> (mg/L)
Benzene*	0.025
BETX	13.525

*Denotes a carcinogen.

d) pH
 Except due to natural causes, a pH range of 6.5 - 9.0 units must not be exceeded in Class II groundwater that is within 5 feet of the land surface.

(Source: Amended at 26 Ill. Reg. _____, effective _____)

SUBPART E: GROUNDWATER MONITORING AND ANALYTICAL PROCEDURES

Section 620.505 Compliance Determination

a) Compliance with standards at a site is to be determined as follows:

- 1) For a structure (e.g., buildings), at the closest practical distance beyond the outermost edge for the structure.
- 2) For groundwater that underlies a potential primary or secondary source, the outermost edge as specified in Section 620.240(e)(1).
- 3) For groundwater that underlies a coal mine refuse disposal area, a coal combustion waste disposal area, or an impoundment that contains sludge, slurry, or precipitated process material at a coal preparation plant, the outermost edge as specified in Section 620.240(f)(1) or location of monitoring wells in existence as of the effective date of this Part on a permitted site.
- 4) For a groundwater management zone, as specified in a corrective action process.
- 5) For groundwater ~~At any point, where at which groundwater~~ monitoring is conducted using a ~~any~~ water well, or a monitoring well that meets one of the following conditions:
 - A) For a potable water supply well if geologic log(s) exist for this well or geologic logs in the immediate 1,000-foot area of this well are representative of the hydrogeologic materials encountered by this well as determined by a licensed professional geologist or a ~~registered~~ licensed professional engineer.
 - ~~B)~~A) For a potable water supply well other than a community water supply well, a construction report has been filed with the Department of Public Health for such potable well, or such well has been located and constructed (or reconstructed) to meet the Illinois Water Well Construction Code [415 ILCS 30] and 77 Ill. Adm. Code 920.
 - C) For a potable water supply well that was constructed prior to August 20, 1965, the enactment of the Illinois Water Well Construction Code [415 ILCS 30~~4~~], and meets all of the following criteria:
 - i) Construction must be done in a manner that will enable the collection of groundwater samples that represent in situ groundwater conditions;
 - ii) Casings and screens must be made from durable material resistant to expected chemical or physical degradation that

do not interfere with the quality of groundwater samples being collected; and

iii) The annular space opposite the screened section of the well (i.e., the space between the bore hole and well screen) must be filled with gravel or sand if necessary to collect groundwater samples. The annular space above and below the well screen must be sealed to prevent migration of water from adjacent formations and the surface to the sampled depth.

~~D)B)~~ For a community water supply well, such well has been permitted by the Agency, or has been constructed in accordance with 35 Ill. Adm. Code 602.115.

~~E)C)~~ For a water well other than a potable water supply well (e.g., a livestock watering well or an irrigation well), a construction report has been filed with the Department of Public Health or the ~~Department~~the Office of Mines and Minerals in the Department of Natural Resources for such well, or such well has been located and constructed (or reconstructed) to meet the Illinois Water Well Construction Code [415 ILCS 30] and 35 Ill. Adm. Code 920.

~~F)D)~~ For a monitoring well, such well meets the following requirements:

- i) Construction must be done in a manner that will enable the collection of groundwater samples;
- ii) Casings and screens must be made from durable material resistant to expected chemical or physical degradation that do not interfere with the quality of groundwater samples being collected; and
- iii) The annular space opposite the screened section of the well (i.e., the space between the bore hole and well screen) must be filled with gravel or sand if necessary to collect groundwater samples. The annular space above and below the well screen must be sealed to prevent migration of water from adjacent formations and the surface to the sampled depth.

6) For groundwater at any potable water supply well listed, monitoring Monitoring shall not be conducted for compliance determinations pursuant to subsection a) of this Section:

A) For a water well:

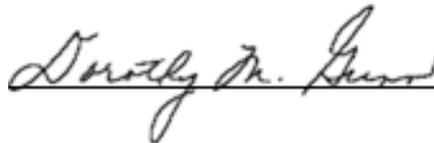
- i) Less than 15 feet in total depth from the land surface, ~~and~~
 - ii) bored or dug, ~~and~~
 - iii) constructed of permeable materials (e.g., cement, tile, stone or brick), and
 - iv) 36 inches or more in diameter.
- B) For a water well with water quality problems due to damaged well construction materials or poorly-designed well construction;
- C) For a water well in a basement or pit; or
- D) For a water well water from a holding tank.
- b) For a spring, compliance with this Subpart shall be determined at the point of emergence.

(Source: Amended at 26 Ill. Reg. _____, effective _____)

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on December 6, 2001, by a vote of 5-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board