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POLLUTION CONTROL BOARD

NOTICE OF PROPOSED AMENDMENTS

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GROUNDWATER QUALITY

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AUTHORITY: Implementing Section 8 of the Illinois Groundwater Protection Act [415 ILCS 55/8] and authorized by Section 27 of the 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 R96-18 at 21 Ill. Reg. 6518, effective May 8, 1997; amended in R97-11 at 21 Ill. Reg. 7869, effective July 1, 1997; amended in \_\_\_\_\_ at \_\_\_\_\_ 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 [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. (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, which has been listed or classified in the Integrated Risk Information System or as specified in a final rule adopted by USEPA in

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accordance with USEPA Guidelines for Carcinogenic Risk Assessment, incorporated by reference at Section 620.125, to be a group A, B<sub>1</sub>, or B<sub>2</sub> carcinogen.

"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. (Section 3.05 of the Act)

"CONTAMINANT" MEANS ANY SOLID, LIQUID, OR GASEOUS MATTER, ANY ODOR, OR ANY FORM OF ENERGY, FROM WHATEVER SOURCE. (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 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.

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

"Method Detection Limit" or "MDL" 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" which means the minimum concentration of a substance that can be measured and reported pursuant to "Test Methods for Evaluating Solid Wastes, Physical/

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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. (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 5].

"Licensed Professional Engineer" means a person, corporation or partnership licensed under the laws of the State of Illinois to practice professional engineering. [225 ILCS 325].

"Licensed Professional Geologist" means an individual who is licensed under [the laws of the State of Illinois] to engage in the practice of professional geology in Illinois ~~personal registered~~ under the Illinois Professional Geologists Act,; [225 ILCS 745].

"LOAEL" or "Lowest observable adverse effect level" means the lowest tested concentration of a chemical or substance 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)

"NOAEL" or "No observable adverse effect level" means the highest tested concentration of a chemical or substance which does not produce a

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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)

"NON-COMMUNITY WATER SUPPLY" MEANS A PUBLIC WATER SUPPLY THAT IS NOT A COMMUNITY WATER SUPPLY. (Section 3.05)

"Off-site" means not on-site.

"On-site" means on the same or geographically contiguous property 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 which he controls and to which the public does not have access 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. (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:

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

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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. (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. (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:

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

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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].

"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: 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 225] 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: 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

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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". (Section 3.28 of the Act)

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

"Regulatory agency" means the Illinois Environmental Protection Agency, Department of Public Health, Department of Agriculture, Department of Mines and Minerals, and the Office of State Fire Marshal.

"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. (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. (Section 3.66 of the Act)

"SETBACK ZONE" MEANS A GEOGRAPHIC AREA, DESIGNATED

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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. (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. (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). (Section 3.62 of the Act)

"USEPA" means the United States Environmental Protection Agency.

SUBPART C: NONDEGRADATION PROVISIONS FOR  
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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:

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- 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 of 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, 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 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 which represent a hazard to the continued availability of groundwater for public use unless a groundwater protection needs assessment has been prepared pursuant to 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

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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	Criterion (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, 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-dichloro-ethylene, trans-1,2-dichloroethylene, methoxychlor, monochlorobenzene, picloram, 2,4,5-TP (Silvex), 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, and 1,1,1-trichloroethane.

Constituent	Criterion (mg/L)
BETX	0.095

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

(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 preventative 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:

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- 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	2
Beryllium	mg/L	0.004
Boron	mg/L	2
Cadmium	mg/L	0.005
Chloride	mg/	200
Chromium	mg/l	0.1
Cobalt	mg/l	1
Copper	mg/L	0.65
Cyanide	mg/L	0.2
Fluoride	mg/L	4.0

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Iron	mg/L	5
Lead	mg/L	0.0075
Manganese	mg/L	0.15
Mercury	mg/L	0.002
Nickel	mg/L	0.1
Nitrate as N	mg/L	10
Radium-226	pCi/L	20
Radium-228	pCi/L	20
Selenium	mg/L	0.05
Silver	mg/L	0.05
Sulfate	mg/L	400
Thallium	mg/L	0.002
Total Dissolved Solids (TDS)	mg/L	1,200
Zinc	mg/L	5

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 must 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

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Endothall	0.1
Endrin	0.002
Ethylene Dibromide*	0.00005
Heptachlor*	0.0004
Heptachlor Epoxide*	0.0002
Hexachlorocyclopentadiene	0.05
Lindane (Gamma-Hexachloro cyclohexane)	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-Dichloro-ethylene	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 Biphenyls (PCB's) (as decachloro-biphenyl) *	0.0005
Simazine*	0.004
Styrene	0.1
2,4,5-TP (Silvex)	0.05
Tetrachloroethylene*	0.005
Toluene	1
Toxaphene*	0.003
1,2,4-Trichlorobenzene	0.07
1,1,2-Trichloroethane	0.005
1,1,1-Trichloroethane	0.2
Trichloroethylene*	0.005
Vinyl Chloride*	0.002

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Xylenes 10

\*Denotes a carcinogen.

c) Complex Organic Chemical Mixtures

Concentrations of the following chemical 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).

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- 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 (pCi/l)
Tritium	Total body	20,000
Strontium-90	Bone marrow	8

(Source: Amended at \_\_\_ Ill. Reg. \_\_\_\_, effective \_\_\_\_\_)

Section 620.420 Groundwater Quality Standard 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), concentrations of the following chemical constituents must not be exceeded in Class II groundwater:

Constituent	Standard (mg/L)
Antimony	0.024
Arsenic	0.2
Barium	2
Beryllium	0.5
Cadmium	0.05
Chromium	1
Cobalt	1
Cyanide	0.6
Fluoride	4.0
Lead	0.1
Mercury	0.01
Nitrate as N	100
Thallium	0.02

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

Constituent	Standard (mg/L )
Boron	2.0
Chloride	200
Copper	0.65
Iron	5
Manganese	10
Nickel	2
Selenium	0.05
Total Dissolved Solids(TDS)	1,200
Sulfate	400
Zinc	10

- 3) The standard for any inorganic chemical constituent listed in subsection (a)(2), 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 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), and any on-site groundwater monitoring of such parameters is available for review by the Agency.
  - B) On the effective date of this Part, surficial characteristics are in the process of being altered by the placement of such fill material, which proceeds in reasonably continuous manner to completion, so as to impact the concentration of the parameters listed in subsection (a)(3), and any on-site groundwater monitoring of such parameters is available for review by the Agency.
- 4) For purposes of subsection (a)(3), the term "fill material" means clean

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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), concentrations of the following organic chemical constituents must not be exceeded in Class II groundwater:

Constituent	Standard (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-Dichlorobenzene	1.5
para-Dichlorobenzene	0.375
1,2-Dibromo-3-Chloropropane*	0.002

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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 (PCB's) (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
1,2,4-Trichlorobenzene	0.7
1,1,2-Trichloroethane	0.05
1,1,1-Trichloroethane	1.0
Trichloroethylene*	0.025
Vinyl Chloride*	0.01
Xylenes	10

\*Denotes a carcinogen.

- 2) The standards for pesticide chemical constituents listed in subsection (b)(1) 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 [415ILCS 60].
- c) Complex Organic Chemical Mixtures

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

Constituent	Standard (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 \_\_\_ Ill. Reg. \_\_\_\_, effective \_\_\_\_\_)

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.

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- 5) For groundwater ~~At any point, where at which groundwater~~ monitoring is conducted using ~~a any~~ water well, or a monitoring well which ~~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 professional engineer; or
  - 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 which was constructed prior to August 20, 1965, the enactment of the Illinois Water Well Construction Code [415 ILCS 30/1]- and meets all of the following criteria:
    - i) Construction must be done in a manner which 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 which 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

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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 of Mines and Minerals for such well, or such well has been located and constructed (or reconstructed) to meet the Illinois Water Well Construction Code [415 ILCS 30, ~~as amended~~] 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 below, monitoring shall not be conducted:

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- 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 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 \_\_\_ Ill. Reg. \_\_\_\_, effective \_\_\_\_\_)