
TITLE 327 WATER POLLUTION CONTROL BOARD**Proposed Rule**
LSA Document #06-280**DIGEST**

Amends [327 IAC 2-11-6](#) to reduce the numeric criterion for arsenic as a health protective goal for untreated ground water used as drinking water, which is also the maximum permissible level of a contaminant in drinking water class ground water. Effective 30 days after filing with the Publisher.

HISTORY

First Notice of Comment Period: August 9, 2006, Indiana Register (DIN: [20060809-IR-327060280FNA](#)).

Second Notice of Comment Period: October 25, 2006, Indiana Register (DIN: [20061025-IR-327060280SNA](#)).

Notice of First Hearing: September 5, 2007, Indiana Register (DIN: [20070905-IR-327060280CHA](#)).

Date of First Hearing: September 12, 2007.

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from October 25, 2007, through November 24, 2007, on IDEM's draft rule language. IDEM received comments from the following parties:

R. James Meiers, Duke Energy (DUKE)

Vincent L. Griffin, Indiana Chamber of Commerce (ICC)

The comments from the Indiana Chamber of Commerce were submitted after the end of the comment period.

Following is a summary of the comments received and IDEM's responses thereto:

Comment: Adopting the arsenic maximum contaminant level (MCL) as a ground water standard imposes a more stringent restrictions than under federal law because there are no federal ground water quality standards. (DUKE, ICC)

Response: There are no federal ground water quality standards, however, the Indiana legislature at [IC 13-18-17-5\(a\)\(3\)](#) specified that the [Water Pollution Control] Board shall adopt standards: "To establish health protection goals for untreated water in water supply wells." On August 8, 2001, the Board finally adopted [327 IAC 2-11](#), the ground water quality standards (GWQS), which, among other things, establish health protection goals for untreated water in water supply wells. The GWQS were developed with extensive workgroup participation and, through the workgroup process, IDEM determined to utilize the U.S. EPA maximum contaminant levels (MCLs) as the numeric criteria for drinking water class ground water. U.S. EPA has established the MCLs for arsenic and other constituents for water supplied by public water supplies to consumers. As IDEM does not have the appropriate resources to establish state-specific health protective numeric criteria for drinking water class ground water and because U.S. EPA establishes the MCLs to be health protective for consumers of drinking water, IDEM continues to believe the MCLs are the appropriate numeric criteria for drinking water class ground water. Therefore, to adequately and equitably protect Indiana citizens who consume untreated water from water supply wells, IDEM believes it is important to adopt the U.S. EPA's revised MCL for arsenic as the numeric criterion for arsenic for drinking water class ground water. In accordance with [327 IAC 2-11-2](#), the ground water quality standards are applied to facilities, practices and activities only through separate rule makings by the appropriate Board and/or Agency. It is during these subsequent rule makings where the issue of "more stringent restrictions" should be discussed in the context of the facilities, practices and activities under consideration in the rule making. Adopting the arsenic MCL does not impose a more stringent restriction on any facilities, practices and activities.

Comment: The IDEM needs to confirm that is it not operating under the assumption that it must adopt the SDWA MCL for arsenic in the ground water standards and that they have information/studies/data that this standard is necessary. (DUKE)

Response: IDEM is not operating under the assumption that it must adopt the SDWA MCL. However, as noted above and pursuant to [IC 13-18-17-5\(a\)\(3\)](#), IDEM believes that adopting the arsenic MCL is appropriate to protect Indiana citizens drinking untreated water from wells. IDEM relied on EPA's information/studies/data in establishing the arsenic MCL. The board is revising the numeric criteria for arsenic in order to provide health protection for untreated water in water supply wells, an action required by the legislature.

Comment: IDEM's statement that this new rule does not have any potential fiscal impact may be incorrect. (DUKE, ICC)

Response: IDEM believes there should be no additional fiscal impact to regulated entities based on revising this numeric criterion because the GWQSs are not applied to regulated facilities, practices and activities until such time as a Board and/or Agency adopts rules, separately, to apply the standards. It is during those subsequent rule makings that questions relating to the fiscal impact on facilities, practices and activities can and should be addressed.

Comment: It should be acknowledged that the use of the arsenic 10 ppb MCL is inappropriate in programs not related to the drinking water class criteria. (DUKE, ICC)

Response: Unless defined as impaired drinking water or limited class under [327 IAC 2-11-4](#), all ground water in the state is drinking water class. As drinking water class, it is appropriate to expect that untreated water in water supply wells should meet the drinking water standards. To address remediation activities, [IAC 2-11-2\(d\)](#) allows for ground water remediation activities consistent with [IC 13-25-5-8.5](#). Additionally, the subsequent rule makings necessary to apply the ground water standards to facilities, practices and activities should address how and where the standards apply relative to regulated facilities, practices and activities.

Comment: IDEM should form a work group to examine this important issue. (ICC)

Response: On July 13, 2007, IDEM with stakeholders including the Chamber and representatives from Duke Energy to discuss the concerns raised in their comments. On August 20, 2007, IDEM followed up with these stakeholders to determine whether additional meetings were necessary. IDEM is not planning to form a work group to examine this issue.

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On September 12, 2007, the Water Pollution Control Board (board) conducted the first public hearing/board meeting concerning the development of amendments to rules concerning the ground water quality standards' numeric criterion for arsenic. Comments were made by the following parties:

Jim Meiers, principal environmental scientist, Duke Energy (DUKE)

Vince Griffin, Indiana Chamber of Commerce (ICC)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: To help the regulated community understand how IDEM intends to apply the proposed change and implement it in the future, we recommend that IDEM, along with appropriate input from the regulated community and other stakeholders, develop a nonrule policy document that would address the concerns that have been raised at past stakeholder meetings on this issue. (DUKE, ICC)

Response: IDEM is committed to develop a nonrule policy document that will articulate the agency position on how the agency would apply the Ground Water Quality Standards. Meetings with stakeholders will be part of that process.

Comment: The nonrule policy document should appropriately encompass all agency programs affected by the proposed change, including those of the Office of Water Quality and the Office of Land Quality. (DUKE)

Response: The agency will work to develop an applicable nonrule policy document for presentation to both this board and Solid Waste Management Board.

Comment: The board should consider delaying a vote on final adoption of this rule until the nonrule policy document has been developed and reviewed by the board. (DUKE)

Response: IDEM agrees with the motion adopted by the board that the presentation of the nonrule policy document should occur either concurrently with final adoption or at the meeting before final adoption of the arsenic rulemaking.

[327 IAC 2-11-6](#)

SECTION 1. [327 IAC 2-11-6](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 2-11-6](#) Criteria for drinking water class ground water

Authority: [IC 13-18](#)

Affected: [IC 4-22-2](#); [IC 13-14-9](#); [IC 13-18-4](#); [IC 13-18-17](#)

Sec. 6. (a) The following numeric criteria are health protective goals for untreated ground water used as drinking water and are the maximum permissible level of a contaminant in drinking water class ground water:

(1) **The following are the** numeric criteria for select inorganic contaminants:

	Contaminant	Criterion (mg/l unless noted) ¹
	Antimony	0.006
	Arsenic	0.05 0.010
	Asbestos	7 MFL ²
	Barium	2
	Beryllium	0.004
	Cadmium	0.005
	Chromium (total)	0.1

Combined beta/photon emitters	4 mrem/yr ³
Cyanide (free)	0.2
Fluoride	4
Gross alpha particle activity (including radium 226 but excluding radon and uranium)	15 pCi/L ⁴
Lead	0.015
Mercury (inorganic)	0.002
Nitrate (as N)	10
Nitrite (as N)	1
Radium 226 and 228 (combined)	5 pCi/L
Selenium	0.05
Thallium	0.002

Notes:

¹mg/l is milligrams per liter.

²MFL is million fibers per liter greater than 10 micrometers in length.

³mrem/yr is millirems per year.

⁴pCi/L is picocuries per liter.

(2) **The following are the** numeric criteria for select organic contaminants:

Table 6(a)(2)

Numeric Criteria for Organic Contaminants in Drinking Water Class Ground Water

Chemical Abstract Registry Numbers	Contaminant	Criterion (mg/l unless noted)
15972-60-8	Alachlor	0.002
1912-24-9	Atrazine	0.003
71-43-2	Benzene	0.005
50-32-8	Benzo(a)pyrene	0.0002
1563-66-2	Carbofuran	0.04
56-23-5	Carbon tetrachloride	0.005
57-74-9	Chlordane	0.002
94-75-7	2,4-D	0.07
75-99-0	Dalapon	0.2
103-23-1	Di(2-ethylhexyl)adipate	0.4
96-12-8	Dibromochloropropane (DBCP)	0.0002
95-50-1	Dichlorobenzene, 1,2-	0.6
106-46-7	Dichlorobenzene, 1,4-	0.075
107-06-2	Dichloroethane, 1,2-	0.005
75-35-4	Dichloroethylene, 1,1-	0.007
156-59-2	Dichloroethylene, cis-1,2-	0.07
156-60-5	Dichloroethylene, trans-1,2-	0.1
75-09-2	Dichloromethane or methylene chloride	0.005
78-87-5	Dichloropropane, 1,2-	0.005
117-81-7	Di(2-ethylhexyl)phthalate	0.006
88-85-7	Dinoseb	0.007
85-00-7	Diquat	0.02
145-73-3	Endothall	0.1
72-20-8	Endrin	0.002
100-41-4	Ethylbenzene	0.7
106-93-4	Ethylene dibromide (EDB)	0.00005
1071-83-6	Glyphosate	0.7
76-44-8	Heptachlor	0.0004
1024-57-3	Heptachlor epoxide	0.0002
118-74-1	Hexachlorobenzene	0.001
77-47-4	Hexachlorocyclopentadiene	0.05

58-89-9	Lindane (gamma-BHC)	0.0002
72-43-5	Methoxychlor	0.04
108-90-7	Monochlorobenzene	0.1
23135-22-0	Oxamyl (vydate)	0.2
87-89-5	Pentachlorophenol	0.001
1918-02-1	Picloram	0.5
1336-36-3	Polychlorinated biphenyls (PCBs)	0.0005
122-34-9	Simazine	0.004
100-42-5	Styrene	0.1
1746-01-6	2,3,7,8-TCDD (Dioxin)	0.00000003
127-18-4	Tetrachloroethylene	0.005
108-88-3	Toluene	1
8001-35-2	Toxaphene	0.003
93-72-1	2,4,5-TP (Silvex)	0.05
120-82-1	Trichlorobenzene, 1,2,4-	0.07
71-55-6	Trichloroethane, 1,1,1-	0.2
79-00-5	Trichloroethane, 1,1,2-	0.005
79-01-6	Trichloroethylene	0.005
75-01-4	Vinyl chloride	0.002
1330-20-7	Xylenes (total)	10

(3) A drinking water class numeric criterion may be added to the criteria established in this subsection if adopted according to [IC 4-22-2](#) and [IC 13-14-9](#).

(b) An agency shall determine if further action is necessary to comply with the narrative criteria established in section 5 of this rule if the following indicator levels are exceeded in drinking water class ground water:

- (1) Chloride at two hundred fifty (250) milligrams per liter.
- (2) Sulfate at two hundred fifty (250) milligrams per liter.
- (3) Total dissolved solids at five hundred (500) milligrams per liter.
- (4) Total coliform bacteria at nondetect.

(c) If the commissioner determines that a site-specific numeric criterion for a contaminant without a drinking water class numeric criterion established in subsection (a) is necessary to protect human health, any natural resource, or the environment, a risk analysis shall be used to establish a numeric criterion for that contaminant and must:

- (1) receive approval from the commissioner; and
- (2) be based upon appropriate toxicological data.

(d) The naturally occurring concentration of a contaminant in drinking water class ground water shall be the numeric criterion if that contaminant occurs at a concentration greater than the drinking water numeric criterion established in subsection (a) or (c) or an indicator level established in subsection (b).

(e) If drinking water class ground water at a facility, practice, or activity is determined to have one (1) or more contaminant concentrations above the numeric criteria established in this section that are not attributable to the facility, practice, or activity under consideration, an agency shall manage the facility, practice, or activity or implement programs such that:

- (1) the facility, practice, or activity causes no further increase in the concentration of the contaminant determined to be above the numeric criterion established in this section; and
- (2) any design standard or management requirements that apply to the facility, practice, or activity are at least as stringent as the design standard and management requirements that would be applied to a facility, practice, or activity where ground water does not have one (1) or more contaminant concentrations above the numeric criteria established in this section.

(f) The commissioner may, for a ground water contamination assessment or remediation at a facility, practice, or activity under the jurisdiction of the department of environmental management, allow an appropriate site-specific, risk-based numeric criterion different from the numeric criterion established in subsection (a) or (d) to be applied to drinking water class ground water within the boundary of the ground water management zone established according to section 9 of this rule.

(Water Pollution Control Board; [327 IAC 2-11-6](#); filed Feb 4, 2002, 11:00 a.m.: 25 IR 1879; readopted filed Jun 4, 2008, 11:07 a.m.: [20080702-IR-327080207BFA](#))

[Notice of Public Hearing](#)

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