ILLINOIS POLLUTION CONTROL BOARD
October 5, 1989

IN THE MATTER OF:	)	
	)	
SAFE DRINKING WATER ACT	)	R88-26
REGULATIONS	)	
	)	

PROPOSAL FOR PUBLIC COMMENT

PROPOSED OPINION OF THE BOARD (by J. Anderson):

Pursuant to Section 17.5 of the Environmental Protection Act (Act), the Board is proposing to adopt regulations which are identical in substance to USEPA regulations implementing the Safe Drinking Water Act (SDWA). This involves the repeal of existing 35 Ill. Adm. Code 604, 605, 606 and 607, and their replacement with a new 35 Ill. Adm. Code 611. The Board will receive public comment for 45 days after the date of publication in the Illinois Register.

Section 17.5 of the Act provides for quick adoption of regulations which are "identical in substance" to federal regulations; Section 17.5 provides that Title VII of the Act and Section 5 of the Illinois Administrative Procedure Act (APA) shall not apply. Because this rulemaking is not subject to Section 5 of the APA, it is not subject to first notice or to second notice review by the Joint Committee on Administrative Rules (JCAR).

The SDWA program is drawn from 40 CFR 141, 142 and 143 (1987). These have been amended by USEPA in the following actions:

52 Fed. Reg. 25712	July 8, 1987
52 Fed. Reg. 41546	October 28, 1987
53 Fed. Reg. 5142	February 19, 1988
53 Fed. Reg. 25109	July 1, 1988
53 Fed. Reg. 37410	September 26, 1988
54 Fed. Reg. 15188	April 17, 1989
54 Fed. Reg. 27526	June 29, 1989
54 Fed. Reg. 27562	June 29, 1989

The last two page numbers in this table are not a typographical error.

The proposal is drawn from the 1987 edition of the Code of Federal regulations, as amended from July 1, 1987 through June 30, 1989. The 1987 edition has been used as the base text, rather than the current 1988 edition, because the Board has the 1987 text in its word processing equipment. The 1987 edition, as amended through June, 1989, is equivalent to the 1989 edition, which should be available by the time this proposal is adopted. The Board will retain the "1987, as amended ..." format in the proposal, since it will make it easier for commenters to track possible errors. At final adoption, the Board will consider changing all references to the 1989 edition.

ABBREVIATIONS

The USEPA rules use a large number of acronyms sporadically. The Board has moved these to the definitions, Section 611.101, and used the acronym wherever appropriate. One effect of this is to tighten the use of defined terms. For example, the USEPA rules define "public water supply", or "PWS", but then go on to use many synonyms, such as "supply" or "system", when "PWS" is obviously intended. The Board rules are clearer in that they use the defined acronym, rather than undefined abbreviations. Also, because there are a large number of long phrases which are frequently repeated, the acronyms shorten the rules. However, the number of acronyms in the resulting rules are apt to cause problems until people get used to them. Since the acronyms are used in the Opinion also, the Board has included the following table of acronyms:

Agency	Illinois Environmental Protection Agency
"BAT"	Best available technology
"Board"	Illinois Pollution Control Board
"CAS No"	Chemical Abstracts Services Number
"CT" or "CTcalc"	The product of "residual disinfectant concentration" (RDC or C) in mg/L determined before or at the first customer, and the corresponding "disinfectant contact time" (T) in minutes.
"CT99.9"	CT value required for 99.9 percent (3-log) inactivation of Giardia lamblia cysts. (See Appendix B)
"CWS"	Community Water Supply.
"GC"	"gas chromatography" or "gas-liquid phase chromatography".
"GC/MS"	GC followed by mass spectrometry.
"HPC"	Heterotrophic plate count, measured as specified in Section 611.531(c).
Ai	Inactivation Ratio: Ai = CTcalc/CT99.9
B	The sum of the inactivation ratios, or "total inactivation ratio" is calculated by adding together the inactivation ratio for each disinfection sequence: B = SUM(Ai)
"MAC"	Maximum allowable concentration, the equivalent of an "MCL" in the existing State regulations.
"MCL"	Maximum contaminant level.

"MCLG"	Maximum contaminant level goal.
"MTP"	Maximum Total Trihalomethane Potential
"NTNCWS"	Non-transient non-community water system.
"NPDWR"	National primary drinking water regulation.
"NTU" or "TU"	turbidity units
"P-A Coliform Test"	Presence-Absence Coliform Test
"pCi"	Picocurie
"PWS"	Public water system.
"Rem"	The unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.
"SDWA"	Safe Drinking Water Act, 42 U.S.C. 300f et seq.
"TTHM"	Total trihalomethanes.
"THM"	Trihalomethane.
"VOC"	Volatile organic compound.

GENERAL APPROACH TO STRINGENCY

Section 17.5 of the Act requires the Board to adopt rules which are "identical in substance" with USEPA Safe Drinking Water Act rules. These rules are found at mainly 40 CFR 141.

These rules largely supersede the existing PWS rules in 35 Ill. Adm. Code 604 through 606. The Board has followed a plan of adopting the larger body of USEPA rules in a new Part 611. The more stringent and additional, consistent State rules have been moved into the body of the federal text.

Most existing State requirements are less stringent than, virtually the same as or inconsistent with the federal, so that there is not a large amount of text to deal with in accommodating the more stringent and additional, consistent State requirements.

The existing State regulations regulate more PWS contaminants than does the federal. For the contaminants regulated in both rule sets, the existing Board regulations are mostly the same or more stringent. An exception are the new federal disinfection requirements which impose inconsistent, and possibly more stringent, microbial standards. The main difference is that the federal rules set standards based on the presence or absence (P/A) of bacteria, as opposed to setting numerical standards. In that it is not possible to make a

stringency comparison, the Board is required to adopt the federal set in lieu of the existing State requirements. (Section 7.2(a)(6) of the Act allows the Board to retain only more stringent conditions which are consistent with federal law.)

Most of the MCL's, both federal and State, are associated with sampling, analysis and reporting requirements. The Board has made the stringency determination with respect to the MCL, and then retained the associated sampling and analysis requirement. For example, it is arguable that the existing Board bacterial analysis requirements, which require counts, are "more stringent" than the new federal P/A tests (since they are harder to do). However, it would not make sense to adopt the P/A standard, and then go on to require bacterial counts.

Most of the MCL's also have a reporting and notice provisions. The Board has proposed to keep the provisions associated with the MCL.

It is a little simpler with respect to the additional MCL's in the Board regulations. The Board has inserted these additional MCL's, along with the associated analytical and reporting requirements, into the body of the federal rules. The Board has used "Board Notes", or other devices, to mark these as additional State requirements. There is a possible complexity in that this may bring the additional requirements into the general umbrella of the federal program. So far no problems in this area have emerged.

AGENCY OR BOARD ACTION?

In the proposal, the Board has almost always changed "Regional Administrator" to "Agency". However, in some situations "Regional Administrator" has been changed to "USEPA" or "Board". Section 7.2(a)(5) of the Act requires the Board to specify which decisions USEPA will retain. In addition, the Board is to specify which State agency is to make decisions, based on the general division of functions within the Act and other Illinois statutes.

The USEPA rules are flexible as to the procedural context for most decisions. The SDWA does not require a construction or operating permit of the type required by 35 Ill. Adm. Code 602. The states have been left the option of requiring a complehensive permit, or of administering the rules through a less formal arrangement. Since Illinois has a comprehensive permit requirement, the Board has generally placed the requirements of 40 CFR 141 into the procedural context of Agency action on a permit application. The Agency has authority to administer such a permit system under Sections 4 and 39 of the Act.

In a few instances, discussed below, decisions are not appropriate for Agency action pursuant to a permit application. Among the considerations in determining the general division of authority between the Agency and the Board are the following:

1. Is the person making the decision applying a Board regulation, or taking action contrary to ("waiving") a Board regulation? It generally takes some form of Board action to "waive" a Board regulation. For example, the Agency clearly has authority to apply a

regulation which says "If A, do X; if not A, do Y". On the other hand, regulations which say "If not A, the state shall waive X" are more troubling.

2. Is there a clear standard for action such that the Board can give meaningful review to an Agency decision?

3. Is there a right to appeal? Agency actions are generally appealable to the Board.

4. Does this action concern a person who is required to have a permit anyway? If so there is a pre-existing permit relationship which can easily be used as a context for Agency decision. If the action concerns a person who does not have a permit, it is more difficult to place the decision into a procedural context which would be within the Agency's jurisdiction.

5. Does the action result in exemption from the permit requirement itself? If so, Board action is generally required.

6. Does the person making the decision have to be the State agency which has signed the memorandum of agreement with USEPA? If so, it would be simpler if the decision were taken by the Agency.

7. Does the decision amount to "determining, defining or implementing environmental control standards" within the meaning of Section 5(b) of the Act? To the extent a decision is similar to a Board action specifying a numerical standard for protection of public health or the environment, it must be made by the Board.

Once it is determined that a decision must be made by the Board, rather than the Agency, it is necessary to determine what procedural context is best suited for that decision. There are four common classes of Board decision: variance, adjusted standard, site specific rulemaking and enforcement. The first three are methods by which a regulation can be "waived" or adjusted to meet specific situations. Note that there are differences in the nomenclature for these decisions between the USEPA and Board regulations. These differences have caused past misunderstandings with USEPA.

The variance mechanism is the simplest method of "waiving" or adjusting a regulation. The variance is initiated by the operator filing a petition pursuant to Title IX of the Act and 35 Ill. Adm. Code 104. The Agency files a recommendation as to what action the Board should take. The Board conducts a public hearing if there is an objection to the variance.

Board variances are: temporary; based on hardship; and, require a plan for eventual compliance with the general regulation. To the extent a USEPA decision involves these factors, a Board variance is an appropriate mechanism. The "variances" in Sections 1415(a)(1)(A) and 1416 of the SDWA, which are discussed in Sections 611.111 and 611.112 below, appear to be very similar to Board variances.

A variance is not an appropriate mechanism for a decision which is not based on hardship, or which grants permanent relief without eventual

compliance. To grant permanent relief in the absence of hardship, the Board needs to grant a site specific regulation or an adjusted standard pursuant to Sections 27 or 28.1 of the Act, and 35 Ill. Adm. Code 102 or 106. Unless the Board regulation specifies a "justification", either mechanism may be used.

As noted above, a few regulations change "Regional Administrator" to "USEPA". Some regulations on their face specify that certain decisions will not be delegated. If there are others, USEPA is invited to comment. The Board has changed "Regional Administrator" to "USEPA" so as to avoid specifying which office within USEPA makes decisions.

SUMMARY OF FEDERAL ACTIONS

As noted above, the base text is drawn from 40 CFR 141, 142 and 143 (1987), as amended through June 30, 1989. the following is a summary of the federal actions encompassed in this time frame:

52 Fed. Reg. 25712	Synthetic organic chemicals; monitoring for unregulated contaminants
52 Fed. Reg. 41546	Public notification
53 Fed. Reg. 5142	Analytical techniques
53 Fed. Reg. 25109	Correction to 52 Fed. Reg. 25712
53 Fed. Reg. 37410	Indian tribes
54 Fed. Reg. 15188	Public notification
54 Fed. Reg. 27526	Disinfection and filtration
54 Fed. Reg. 27562	Total Coliform MCL

SECTION-BY-SECTION DISCUSSION

The following is a Section-by-Section discussion of the proposal.

GENERAL PROVISIONS

Section 611.100

This Section is derived from 40 CFR 141.1 (1987). It has been largely rewritten to state the purpose, scope and applicability of the State program. This Part is intended to satisfy the requirement of Section 17.5 of the Act that the Board adopt regulations which are identical in substance with federal regulations promulgated by USEPA pursuant to the SDWA. This Part includes both national primary drinking water regulations, and additional, more stringent State requirments, which have been moved from old Parts 604 through 607.

This Part mainly applies to "PWS's", which are defined below. There are a few other provisions which appy to persons other than the system itself, such as the prohibition on the use of lead solder and flux.

This Section is related to existing 35 Ill. Adm. Code 604.405.

Section 611.101

This is the definitions Section. The Board has added definitions of "Act", "Agency" and "Board", shortened forms of commonly used State terms.

Note that the USEPA rules use "Act" to mean "SDWA". The Board has defined and used the later acronym for the federal Act.

The Board has added a "Board Note" after each federally derived definition. This will make it easier to find the sources of these definitions, many of which have recently been added or amended.

The USEPA rules adopted at 54 Fed. Reg. 27526, June 29, 1989, include a definition of "CT", meaning the product of "RDC" times "disinfectant contact time". This, and related definitions, are important for determining compliance with the new disinfection standard in Section 611.141 below, which requires 99.9% removal or inactivation of G. lamblia cysts.

The definition of "CT" includes two subsidiary definitions which have been factored out and stated separately for greater clarity. These are "CT99.9" and "inactivation ratio". These have been placed in quotes to make it clear that they are defined elsewhere, and their Board Notes indicate that their origin is in the definition of "CT".

The definition of "CT", and derived definitions, include subscripts and formulas which are difficult to place into the format required by the Administrative Code Unit. The literal text of the USEPA definition would have to be moved to an appendix, which would be unsatisfactory for an important definition. The Board has therefore broken the definition up, and changed the format of the formulas, so as to comply with Code Unit requirements.

"CT99.9" is the value for "CT" which achieves 99.9% removal or inactivation of G. lamblia cysts. These values are found in Appendix B.

The Board has added a definition for "community water supply" ("CWS"). This is hard to find in the USEPA rules, since it is defined within the definition of "PWS".

The Board has defined "GC" and "GC/MS", which are undefined acronyms used in the USEPA rules. "GC" means "gas chromatography", which is actually an abbreviation for "gas-liquid phase chromatography", since column temperatures are generally kept below the boiling point of the material being analyzed. "GC/MS" is GC, follwed by mass spectrometry.

The USEPA rules make frequent reference to the "Groundwater Supply Survey". The Board has added a tautological definition, and **solicits comment** as to what this means.

The definition of "halogen" is drawn from the USEPA rules. Note that it excludes a common halogen, fluorine.

The Board has added a definition for "HPC", or "heterotrophic plate count". This is defined by reference to its measurement method. This definition avoids having to repeat "heterotrophic plate count, measured as specified in Section 611.531(c)" many times in the body of the regulations.

The definition of "inactivation ratio" is derived from the definition of "CT" as discussed above. The inactivation ratio is a measure of the success of a single disinfection operation. The inactivation ratio is:

Ai = CT/CT99.9

The "total inactivation ratio" of a series of disinfection operations is:

B = SUM (Ai)

The Board has defined shorter symbols for the inactivation ratio and total inactivation ratio. It is impossible to meet Administrative Code Unit requirements with the symbols used in the USEPA rules. It is evidently impossible for the USEPA to work with them also, as evidenced by 54 Fed. Reg. 27534, in which the text of 40 CFR 141.74 collapses into utter chaos, partly because of the problems these symbols cause.

The Board has added acronyms for "national primary drinking water regulation" ("NPDWR"), turbidity units ("NTU" or "TU") and "Presence-Absence coliform test ("P-A coliform test"). These acronyms are used in the USEPA rules, but not defined. With respect to turbidity units, is there a difference between "NTU" and "TU"? If they are the same, one acronym should be used. The Board **solicits comment.**

A "PWS" is a system with at least 15 service connections, which serves at least 25 individuals on a daily basis for at least 60 days out of the year. A "CWS" is a "PWS" which serves the same number of people on a year-round basis. Note that "CWS" is defined, in a similar manner, in the Act. However, the Board believes that, pursuant to an identical in substance mandate, it must adopt the definitions with the associated USEPA rules. To do otherwise would change the scope of the identical in substance regulations, violating the mandate of Section 7.2(a) of the Act that the Board adopt regulations regulating the same activities and persons as would the USEPA program.

In the text of 40 CFR 141, USEPA defines "PWS" and "CWS", but then uses a large number of synonyms, such as "supply" and "system". The Board has attempted to change all of these to "PWS", "CWS", "non-CWS" or "NTNCWS", whichever is appropriate. This makes the rules clearer and shorter, and avoids ambiguities which arise from the use of the undefined synonyms.

One problem arises from USEPA's use of the term "system" as a synonym for "PWS". In some Sections, this term is used both to mean "PWS" and to mean "distribution system", i.e. plumbing. Generally the Board has attempted to use "system" only in the latter sense. Another problem arises from the use of "supply". This could mean either "PWS", or the source of raw water.

USEPA uses "system" or "supply" as a generic term to mean "PWS, CWS or whomever the above provisions apply to". In many Sections below, the Board has used "PWS" in this sense. For example, a USEPA provision may "This Section applies to CWSs. ... Supplies may use Standard X to comply. The Board has attempted to use the more limited terms, such as CWS, where appropriate. However, in some cases it is not obvious that the USEPA rule is referring to the limited class. In these situations the Board has used "PWS" as a generic term. Generally, after a narrower term has been used, "PWS" should not be costrued as expanding the scope of a provision. The Board **solicits comment** as to whether any "PWSs" need to be narrowed.

40 CFR 141 is ambiguous as to whether "PWS" means: the waterworks, distribution system, etc.; the entity which owns the waterworks; or, the owner of that entity. In almost all of 40 CFR 141 it is clear that USEPA means the entity, together with its owner. However, as noted above, the rules sometimes get confused as between the entity and the plumbing. Also, a few provisions speak of the "owner of the supply" or "owner of the PWS", implying that "PWS" may not include the owner of the entity. However, a better reading of these is that USEPA means "entity which owns the plumbing", which is a long way to say "PWS". The Board suggests that the best interpretation is that, as actually used by USEPA, "PWS" includes both the entity and the owner of the entity, but **solicits comment.**

The Board has added an acronym for "VOC", which is used in the USEPA rules without definition. The Board assumes this means "volatile organic compound". However, it is not clear what VOC's have to do with the Sections in which the acronym is used. (Section 611.180, 40 CFR 141.100 and Section 611.340 and 611.648, 40 CFR 141.61 and 141.24(g).)

The USEPA rules make repeated references to "wellhead protection programs developed under Section 1428" of the SDWA. In R89-5 the Board is proposing to adopt in 35 Ill. Adm. Code 615 through 617 a set of groundwater protection regulations which it believes will be approvable under Section 1428. The Board has provided a cross reference to these proposed regulations, but **solicits comment.**

Section 611.102

This is the incorporations by reference Section. 40 CFR 141 contains more than 43 incorporations by reference.

The Illinois Administrative Procedure Act (APA), and derived regulations, restrict the use of such references in rules. (Ill. Rev. Stat. 1987, ch. 127, par. 1006.02) An Illinois agency may incorporate such standards or guidelines into a rule without publishing the standard or guideline in full if:

1. The standard is from a federal agency or a nationally recognized organization.

2. The rule contains the address of the agency or organization for purposes of ordering the standard.

3. The agency or organization makes copies readily available to the public.

4. The rule includes the date of the standard.

5. The rule states that it does not include later editions or amendments.

6. The agency maintains a copy of the standard in its files for public inspection and copying.

The Board has assembled the incorporations by reference into this Section, in a manner similar to that employed in many other identical in

substance rulemakings. This will allow the Board to use an abbreviated form of reference in the remainder of the regulations, making the proposal much shorter and clearer. This will also allow it to periodically update the references without having to repropose the substantive regulations.

Many of the materials which are incorporated by reference into this Part have very long titles. Section 611.102(a) contains a list of abbreviated names, which are used in the ensuing Sections. For example, "Standard Methods for the Examiniation of Water and Wastewater" has been shortened to "Standard Methods". This subsection also serves to cross reference from name of document into name of publisher, by which the next subsection is arranged. For example, Standard Methods is available from the American Public Health Association.

The incorporations by reference fall into six major categories:

1. ASTM Standards

2. Standard Methods for the Examination of Water and Wastewater.

3. Other nationally recognized organizations

4. Government publications, including USEPA and USGS Test Methods

5. Journal articles

6. Miscellaneous.

The ASTM standards are the easiest to deal with. The problem is that USEPA is referring to out of date standards. An example is the the use of ASTM D1067-70B, used in 40 CFR 141.42. The final two digits indicates the 1970 edition. ASTM updates its standards on a five year cycle, so that this reference is probably three or four revisions out of print. It is very difficult to locate old ASTM standards. Furthermore, it is doubtful whether they meet the "publicly available" criterion under the APA, since a member of the public cannot simply order a copy of the out-of-print standard.

The Board has proposed to utilize the current editions of the ASTM standards, from the 1989 Annual Book of ASTM standards. The Board **solicits comment** comment from USEPA and others as to whether any of the older standards are actually necessary for the rules.

The Board also notes that 40 CFR 136 specifies analytical methods for the Clean Water Act related rules. 40 CFR 136 is in turn referenced in the SDWA rules. It generally references newer editions of the ASTM standards, although not as new as the current editions. Does USEPA perhaps regard 40 CFR 136 as controlling instead?

The ASTM standards are available either as individual standards or through the annual book. The Board has followed the course of incorporating the individual standards, rather than the 1989 annual book. This avoids incorporating extraneous material. It will also simplify the routine updating of standards as they are revised. Note that most of the referenced standards will appear in the 1990 and 1991 annual books, but all will eventually be

replaced by revised standards.

Another problem has to do with references to specific methods within an ASTM method. This is usually indicated by a letter following the date designation. The Board has generally dropped these subdesignations, on the assumption that they are no longer valid with respect to the newer editions. However, the Board **solicits comment** as which submethods need to be specified. Note that it may be better to incorporate the entire method, and specify the submethod at the point where used.

Following are specific problems with individual ASTM standards.

ASTM D992-71 is a method for determination of nitrate. This standard has been replaced with ASTM D3867, which is also cited in the USEPA rules. (40 CFR 141.23 and Section 611.606) The Board has proposed to drop the citation to the earlier method, since it is no longer publicly available.

ASTM D2459, "Gamma Spectrometry in Water", was discontinued in 1988. The Board has proposed to cite to the most recent edition, but **solicits comment** as to whether this is still "publicly available".

The Board has added references to ASTM D858, D1068, D1691, D1688 and D2036. These are standard methods for manganese, iron, zinc, copper, and cyanide, the additional inorganic parameters regulated by Illinois, as discussed below in Section 611.300. The references are to the current editions of the ASTM standards used in 40 CFR 136.

The references to "Standard Methods" are also fairly easy to deal with. The USEPA rules use at least three editions of "Standard Methods for the Examination of Water and Wastewater." The 17th Edition is expected very soon. The Board has proposed to reference only this Edition. Again, it is doubtful whether Editions earlier than the 16th are still "publicly available", since members of the public could not order them. Again, the Board **solicits comment** as to whether certain Methods have to be referenced to the older works.

Note that there is a difference betwen the way in which the ASTM standards and Standard Methods are handled. The Board has incorporated the entire edition of Standard Methods, because it is a publication which is completely replaced every few years, and because individual standards are not separately available.

The proposal assumes that the numbers of the methods (and submethods) will remain the same throughout these editions. Commenters are urged to review these to make certain this is the case.

Standard Methods is co-published by the American Waterworks Association (AWWA), which is a member of the American National Standards Institute (ANSI). Although Standard Methods itself is not an American National Standard, the Board believes that AWWA's participation in ANSI, together with USEPA's use of its standards, establishes it as a "nationally recognized organization". However, as discussed below, there may be problems with the use of AWWA journal articles.

The third category is to standards of other nationally recognized organizations. This includes only AWWA C-400, a standard for asbestos-cement pipe. This is a joint ANSI/AWWA standard, and hence is clearly "nationally recognized". 40 CFR 141.42 cites to the 1977 Edition. The Board has cited to the current 1980 Edition, which is publicly available.

Although the CFR cites to the 1977 Edition, it is using the title of a still earlier edition. In 1977 the scope of this standard was narrowed from 4 to 24 inch pipe to 4 to 16 inch pipe. However, the CFR still cites the title as 4 to 24 inches. If USEPA needs to reference a standard for the 16 to 24 inch pipe, it needs to reference ANSI/AWWA C-403, or related standards. The Board **solicits comment.**

The fourth category of incorporations by reference is government publications, including the USEPA and USGS documents. The APA authorizes the use of federal government publications under similar conditions to private documents. The main problem is whether the documents are publicly available.

USEPA has promised to assemble all of the referenced materials for the Board. However, the Board did not receive these in advance of the proposal. The Board therefore made an effort to independently locate these documents.

The Board attempted to locate these documents through the University of Illinois Documents Library. This is a United States Government Depository Library, into which United States Government publications are supposed to be archived. It is a part of one of the largest university libraries in the United States. It is staffed with professional librarians who deal with Government documents on a full time basis. They were not very successful in locating the USEPA documents. This raises a question as to whether these documents are indeed "publicly available."

The Board has made some effort at directly locating the documents. There are three major sources from which Government documents can be purchased: The National Technical Information Service (NTIS); the Government Printing Office (GPO); and, the agency itself. To order the documents, one needs to know the stock number. The information provided in the USEPA rules is nowhere near sufficient to order these documents. The operators at the federal numbers are not very helpful if one doesn't have sufficient information. For a few documents, however, the results of the University of Illinois search, combined with telephoning, produced some results, mostly negative.

"Methods for Chemical Analysis ...", "Procedures for Radiochemical Analysis..." and the "USGS Methods" are definitely out of print, according to the GPO. "Methods for Chemical Analysis" and "Microbiological Methods" are available from NTIS. The remaining USEPA documents are definitely not available from GPO. It was not possible to get a definite answer from USEPA.

Two of the USEPA documents (THM Methods) are apparently present as an Appendix to 40 CFR 141, although the Appendix is not cited in the body of the rules. Similarly, "Inductively Coupled Plasma-Atomic Emission Spectrometric Method..." is apparently present as 40 CFR 136, Appendix C. The Board has cross referenced into these CFR cites, which are incorporated by reference in

subsection (c). The Board **solicits comment** as to whether these are correct.

The USEPA rules apparently reference nine USEPA documents. One problem may be that some of these references are to chapters within other references: i.e., there may actually be fewer than a total of nine references. Another posssibility is that some references may be to preliminary drafts which are now finalized under a different title.

The Board has proposed to use all of the USEPA references, in hope that they will be completed during the comment period. However the difficulty in locating these documents casts doubt on whether they are "publicly available" within the meaning of the APA. The Board notes that these documents generally set forth alternative methods for parameters which are also covered under ASTM and Standard Methods. To the extent these documents are redundant, it may be better to omit them from the final rules. If they are indeed essential to the rules, it may be necessary to set them forth at length as an appendix to the rules. Since this will be a difficult, expensive task, the Board **solicits comment** as to whether any of these documents contain methods for which there is no alternative.

The Board has added a reference to the draft Guidance Manual for the filtration and disinfection requirements discussed below. It may be necessary to reference this for complete standards for the "under the influence of surface water" and "filtration" determinations. It will probably not be possible to reference the draft document in the adopted rules. The reference is included in the proposal in hope that the Guidance Manual will be finalized in time for adoption of the rules.

The USGS publications are confirmed as out of print by the GPO. The Board has deleted the GPO stock numbers, which are given at 40 CFR 141.23 and 141.24, since they are no longer valid. The Board has replaced GPO with USGS as the source of this document, since GPO was unable to find a more current version. However, the availability will need to be completed before this rule is filed. Note that similar sounding, more recent USGS publications are cited in 40 CFR 136.

Another Government publication is NBS Handbook 69, which is involved in interpreting radiological standards. This is also confirmed as out of print by the GPO.

The fifth category is Journal articles. These relate to two articles concerning P-A Coliform tests in the AWWA journal "Applied and Environmental Microbiology". The APA definitely does not authorize incorporation by reference of journal articles. Hopefully the contents of these will be in the 17th Edition of Standard Methods. If not, the Agency and USEPA will need to obtain permission from the authors and publisher to reprint the articles in the rules.

The sixth category are items which appear to be proprietary. The fifth category includes: Amco Standards; HASL Procedure Manual, SPE Test Method; Indigo Method; and, Technicon Methods. Although the Board has not conducted a detailed investigation of these items, on their face they do not appear to be publicly available. The Board has included them in the proposal for the purposes of comment, but intends to strike them on final adoption, unless

commenters show that the items are "available to the public". An alternative would be to set them forth at length, for which commenters would need to obtain permission from the authors and publishers.

There is a question as to whether publication of a copyrighted item in a rule would place the item into the public domain. The Board proposes that it could include a copyright notice in such an item, but **solicits comment.** However, the Board's rules would be reprinted by the Agency, by the Administrative Code Section and by several private publishers, such as BNA. The Board could not guarantee that they would retain the copyright notice. Furthermore, the public may have a fundamental right to copy administrative rules, which right would be inconsistent with the copyright.

The Amco Standards reference has a deeper problem. It is a reference to a commercially available chromatography standard column. This probably cannot be referenced. For one thing, the the APA authorizes incorporation only of documents. Furthermore, the column could not be dated. Referencing the column would therefore subdelegate governmental authority to a private entity, which could change the properties of the standard column, thereby essentially changing the MCL's. The Board **solicits comment** as to whether their might be an objective description of the column which could be substituted for the reference to the commercial product.

Section 611.103(c) references federal regulations. These are "abonormal" incorporations by reference, i.e. federal rules other than the rules which have to be adopted as identical in substance rules. These are grouped here in order to ease the problem of routine updating of the references.

40 CFR 141.136, Appendix B is cited in 40 CFR 141.24 and 141.40. It sets laboratory approval standards.

40 CFR 141.136, Appendix C, and 40 CFR 141, Subpart C, Appendix C contain analytical methods which are discussed above. Note that the latter may be a "normal" incorporation, which should be moved into the body of the rules. However, it seems to be floating in the body of 40 CFR 141 without any mention of it in the text of the rules proper.

Section 611.108

This Section provides that the Agency may subdelegate portions of its functions to units of local government pursuant to Section 4(r) of the Act. This Section is a dummy Section to hold the reference to Section 4(r). This allows the Board to use a shorter form of reference to this Section in the body of the rules. Also, in the event Section 4(r) is renumbered, the problem will be localized in the rules.

Section 611.109

This Section is derived from 40 CFR 141.22(e) (1987), as amended at 54 Fed. Reg. 27526, from 40 CFR 141.23(e)(4), as amended at 53 Fed. Reg. 5146, February 19, 1988, and from numerous similar provisions scattered throughout 40 CFR 141. These all provide that an MCL is enforceable, and that the results of required monitoring may be used in an enforcement action. This is obvious as a matter of Illinois law. The numerous provisions have been

consolidated into a single Section to make the regulations more readable.

Section 611.110

This Section is derived from 40 CFR 141.3 (1987). This Section is entitled "Coverage", which is somewhat misleading. Actually it is a narrow exemption for systems which consist only of distribution and storage, which obtain all their water from a PWS, which do not sell water and which are not interstate carriers. The Board **solicits comment** as to whether this last provision is appropriate in the State program, since interstate carriers are going to be federally regulated anyway.

Section 611.111

This Section is derived from 40 CFR 141.4 (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989; it is intended as a State equivalent of Section 1415(a)(1)(A) of the SDWA. Section 611.111(a) provides procedural guidelines to the PWS in filing a variance petition pursuant to 35 Ill. Adm. Code 104. Section 611.111(b) discusses the findings the Board must find before allowing a variance. The PWS must demonstrate that it cannot meet an MCL because of source water characteristics; that it has applied BAT; and, that a variance will not impose an unreasonable health risk. Subparts (c) and (d) detail the compliance and implementation schedules to be issued by the Board. Subpart (e) provides for a public hearing on the merits of the request. Subpart (f) specifies situations when the Board will not grant a variance.

The Section 1415, and 1416 variance discussed below, are referenced into 40 CFR 141.4. Rather than adopt a reference in Board regulations, the Board has proposed to adopt text which is equivalent to the SDWA provisions. The references are similar to incorporations by reference in that they defer to another document for the standard for decision. Section 6.02 of the Administrative Procedure Act neither authorizes nor prohibits this type of reference to a federal statute. However, in that these references are just like incorporations by reference, they have the same problems: the reference would leave the regulation incomplete to the reader, and would subdelegate State rulemaking authority to Congress in the event of future amendments. In addition, the Board has had cases in the past dealing with federal variances which, at a minimum, would have been simpler if the federal variance and federal/State interaction were dealt with explicitly in the regulations. (Stepan Chemical v. IEPA, PCB 79-161; 39 PCB 130, 416, July 24 and September 4, 1980) For these reasons, the Board has proposed to set forth text which is equivalent to the SDWA provisions.

Section 1415(a)(1) speaks of the State granting "one or more" variances to "one or more" PWS's. The Board's implementing language is worded in the singular. However, under the Board's general procedural rules a PWS with multiple problems could combine them into a single variance petition, or could file a separate petition with respect to each MCL. Likewise, PWS's with similar problems could request that the Board consolidate their petitions.

Section 1415(a)(1) also requires the Administrator to "promulgate" his findings of BAT with respect to each MCL. There are several BAT findings in the USEPA rules reflected in Section 611.300 et seq. (For example, see Section 611.340(b)). It is possible that USEPA has also specified BAT by way

of guidance documents. If this is the case, these should be incorporated into the regulations by reference to make this variance procedure work. The Board **solicits comment.**

Section 1415(c) of the SDWA requires the State to act "within a reasonable time" after receiving a "variance" request. As noted above, the Board has proposed to use its variance procedures to consider such requests. Section 38(a) of the Act requires the Board to act within 120 days on a variance petition. This is almost certainly a "reasonable period". However, the Board notes that Section 38 of the Act provides for a one year default variance if the Board fails to act within the time period. The Board also notes that no special legislative provisions are included for the variances for the RCRA, UIC or NPDES programs. Although defaults are rare, the Board **solicits comment** on this issue.

The Board has proposed to use its variance mechanism as the State equivalent. This is discussed in general above. In addition, there is ample precedent for the Board granting variances from State MCL's which are the same as the USEPA MCL's, consistent with Section 1415 of the SDWA. (Geneva v. IEPA, PCB 86-225; 79 PCB 45, 60, July 16, 1987.)

Section 35(a) of the Act allows the Board to grant variances upon a finding of "arbitrary or unreasonable hardship". The Board construes the SDWA standards for granting Section 1415(a)(1)(A) and 1416 variances as a lesser type of hardship which goes into the arbitrary or unreasonable hardship finding under State law.

The wording of Sections 1415, and 1416, of the SDWA are difficult to understand. It appears that the basic 1415 standard, "because of the basic characteristics of the raw water sources which are reasonably available", is a hardship standard. (Section 1415(a)(1)(A)) It also appears to require a compliance plan and eventual compliance with the general regulations. (Section 1415(a)(1)(i) and (ii)) However, these could be read as asking for an alternative MCL, and a plan for complying with the alternative. This interpretation is more consistent with the requirement that the PWS meet BAT before applying. How could the PWS comply with the general MCL if it has already used BAT and failed? If this "variance" is to lead to an alternative MCL, an adjusted standard would be more appropriate. However, these variances are discussed at 52 Fed. Reg. 25692, July 8, 1987. This appears to say that compliance with the MCL is ultmately required. The Board **solicits comment,** especially from USEPA.

40 CFR 141.4 provides that the State cannot grant an SDWA variance with respect to the MCL for total coliform or the filtration and disinfection requirements, which are in Subpart B below. The Board has repeated this in this and the following Section. However, it is possible that in the overall scheme of things, this language could apply to only one or the other type of "variance". The Board **solicits comment.**

Finally, Section 1415(a)(3) contains what appears to be a second "variance" procedure which requires an adjusted standard. This is discussed in Section 611.113.

Section 611.112

This Section is intended as a State equivalent of Section 1416 of the SWDA. Subsection (a) provides procedural guidelines to the PWS in applying for an "exemption". Subsection (b) discusses the findings the Board must find before allowing a variance. The Board must find that the PWS is unable to comply with an MCL or treatment requirement "because of compelling factors (which may include economic factors)". This "variance" is available only to a PWS which was in operation before the MCL, or which has no other "reasonable alternative source" of raw water. Subsection (c) details the compliance and implementation schedules to be issued by the Board. Subsection (d) provides for extensions on the variance. Subsection (e) is a public hearing provision. Subsection (f) notes the USEPA shall be notified of all petitions and shall notify the Board of requests that do not meet the requirements of the Section. Subsection (f) specifies situations when the Board shall not grant a variance.

The Section 1415 and 1416 variances are very similar. The following are differences:

1. While the 1415 variance depends on raw water characteristics, the 1416 variance depends on economic factors.

2. The 1415 variance is available only to a PWS which has applied BAT.

3. The 1416 variance is available only to existing PWS's, or to those with "no reasonable alternative source" of raw water.

4. While the 1415 variance requires compliance "as expeditiously as possible", the 1416 variance has definite time limits.

5. A 1416 variance is subject to USEPA review. (see below).

Section 611.112(d) generally limits compliance schedules to a maximum of 12 months. Subsections (d)(1) and (d)(2) allow extensions under certain conditions. These are derived from Section 1416(a)(2)(B) and (C). Subsection (d)(1) is a general three year extension for PWS's which need to make capital improvements. Subsection (d)(2) is for small PWS's which need improvements.

At the end of Section 1415(a)(2)(B)(iii) is a requirement that the PWS take "all practicable steps to meet the standard." There is a question as to whether this modifies only subsection (iii), or subsections (i) through (iii). In the version of the SDWA the Board is working from, the text returns to the preceding level of indentation, as though this was a (one line) "hanging" paragraph, at the (a)(2)(B) level, modifying all three subsections. The Board has followed this reading, which makes more sense than the limited reading. However, "hanging" paragraphs are prohibited by the Code Unit. This condition has therefore been moved up to (d)(1) level, so that it governs Section 611.112(d)(1)(A) through (C).

Section 1416(c) and (d) of the SDWA require the State to notify the Regional Administrator of Section 1416 variances, and create a system by which USEPA is to review variances, with possible revocation. Most of this applies to USEPA, and should not be adopted as a State regulation. (Section 7.2(a)(1)) However, the Board has fashioned a procedure which carries out the

State's obligations under these provisions. (Section 7.2(a)(3) of the Act.)

Section 611.112(f) requires the Agency to send USEPA a copy of each variance. The Board may reconsider and modify a grant of variance, or variance conditions, if the Administrator notifies the Board of a finding pursuant to Section 1416 of the SDWA.

Section 611.113

As is discussed below, USEPA regulates some contaminants by establishing an MCL, and others by requiring a certain treatment technique. Section 1415(a)(3) of the SDWA allows the Administrator to approve alternatives to treatment technique requirements upon a showing that an alternative technique is "at least as effective in lowering a contaminant" as the required technique. The Board has proposed to use the adjusted standard mechanism of Section 28.1 of the Act and 35 Ill. Adm. Code 106. Variances are not appropriate since the PWS is not expected to come into eventual compliance.

Neither the regulations nor the SDWA specify that this procedure can be delegated to the States. The Board has proposed a mechanism on the assumption that the mechanism is delegatable. If it is not, there will need to be a mechanism by which the Board passes USEPA's "variances" into State law. The Board **solicits comment** on this.

Section 611.114

This Section is derived from 40 CFR 141.5 (1987). This is a regulation restricting the location of new PWS structures in locations subject to earthquakes, floods or other disasters.

The USEPA rule merely requires notification of the State before construction. The Board has referenced the construction permit requirement of Section 602.101.

The USEPA rule includes restrictions on the location of structures below high tide marks. For geographical reasons these are not applicable in Illinois.

The USEPA rules also require the PWS to avoid locating at a site which is subject to a significant risk from earthquakes, "to the extent practicable". This may also be inapplicable in Illinois for geographical reasons. Large areas of Southern Illinois are subject to a significant risk of earthquakes. However, unlike California earthquakes, these are from deep faults which are not associated small areas of especially high risk at the surface. The effect of this provision seems to be just to establish a presumption against new construction in the southern third of the State. However, the PWS regulations fundamentally assume that a water supply will be built in each community, and expanded as necessary to serve the community's needs. The Board **solicits comment** as to whether this provision ought to be deleted as geographically inappropriate for the Illinois program.

The final sentence of this Section provides that USEPA will not seek to override State or local land use decisions. The Board has proposed to delete this, because it governs actions to be taken by USEPA. An alternative

interpretation is that this is a pattern rule which the states are supposed to adopt, after shrinking it to State size. The Board **solicits comment.**

While Agency or Board actions do not in and of themselves "seek to override" local land use decisions, they can have the practical effect of superseding the exercise of local land use decisions. For example, pursuant to Board regulations, the Agency is required to place a water supply on restricted status, thus disallowing construction of water main extensions, for non-compliance with State standards. As another example, the Agency and Board are in the process of implementing the State's Groundwater Protection Act, which includes restrictions on the location of certain facilities within set-back zones around wellheads.

Section 611.120

This Section is derived from 40 CFR 141.60 (1987), as amended at 52 Fed. Reg. 25712, June 8, 1987 The USEPA rules list past effective dates for many of the USEPA provisions. The Board has deleted these since they all are past. PWSs will be required to comply with these provisions, as State regulations, upon the date these regulations are filed. Note that many of these provisions have earlier effective dates under old Parts 604 through 607. Also, federal enforcement remains possible for past violations under 40 CFR 141. The newer USEPA provisions include effective dates with the provisions, and are contained in other Sections of the proposal.

Section 611.124

The Board has proposed to move the prohibition on cross connections from existing 35 Ill. Adm. Code 607.104. An alternative would be to leave this in Part 607. The Board **solicits comment.** This Section is subject to major revision in an Agency proposal in R87-37.

The Board has proposed to reword this Section to comport with the usage of terms in this Part. The Board does not intend to change the meaning of these requirements.

Subsections (a) and (b) have been placed into active voice. As construed in the proposal, these are prohibitions which could be violated by any person, not just the PWS. The word "permitted" has been construed to mean "allow", as opposed to "approve by permit condition". As used in this Part, "permitted" always refers to approval by permit condition, which is not intended here.

Subsection (a) authorizes connection between supplies of equal quality "as determined by inspection and analysis by the Agency". This has been deleted as unneccesary, since the MCL's and methods of analysis are set forth at length in this Part.

The existing Section suffers from the ambiguities in the use of "supply" which are discussed above in the definition of "PWS". Generally the Board has proposed to terms as discussed above: "PWS" includes the "owner or official custodian"; and, "supply", meaning the plumbing, has been replaced with "distribution system".

Section 611.124(c) concerns connection to "privately owned water

supplies". First, there is an ambiguity as to whether this is referring to PWS's which are privately owned, or to "supplies" which are too small to be PWS's. Note that public v. private ownership is not a part of the definition of PWS. Second, There is a possibility that the subject matter of this paragraph is addressed in Section 611.500. The Board **solicits comment.**

Existing 35 Ill. Adm. Code 607.104(d) allows the Agency to adopt "specific conditions for the control of unsafe cross connections". Consistent with the general approach taken in this Part, the Board has proposed to specify that this be done by permit condition. The Board has proposed to drop the reference to existing 35 Ill. Adm. Code 602.115, out of concern for statutory authority for that Section under the APA as currently interpreted. Although the APA requires the Agency to follow APA rulemaking procedures when it makes a "statement of general applicability that implements, applies, interprets, or prescribes law or policy" (Section 3.09 of the APA), the APA does not confer jurisdiction on the Board to require the Agency to do so.

Section 611.125

The Board has moved the mandatory fluoridation requirement from 35 Ill. Adm. Code 604.405. This is an additional State requirement. Since mandatory fluoridation is enforced by the Department of Public Health, the Board **solicits comment** as to whether it shoud retain this provision in the regulations.

Section 611.126

This Section is derived from 40 CFR 141.43 (1987). It prohibits the use of lead pipes, flux or solder in a PWS, and in connected private plumbing. This has been moved to the front of the regulations, since it is a prohibition which any member of the public could violate.

FILTRATION AND DISINFECTION

Section 611.128

This Subpart addresses filtration and disinfection. It is drawn from 40 CFR 141.70 et seq, as adopted on June 29, 1989. This Subpart establishes mandatory equipment and operating regulations which function as MCLs. These have been moved toward the front of the Part in that they establish requirements which logically precede the MCLs.

This Section addresses several Agency determinations which are referenced at several points in the USEPA rules, but which are not explicitly stated. The Board has collected these into a single Section to efficiently specify the standards and procedural context for Agency action. The standards are drawn from the body of the federal rules, from the preamble to the federal rules and from USEPA guidance documents. The Board has proposed to incorporate the Draft Guidance Document by reference in Section 611.102. However, it probably would not be acceptable to do this in the adopted regulation, as provided by Section 6.02 of the APA. The Board will drop this from the regulations if the Guidance has not been finalized by the time of final adoption. The Board **solicits comment** as to the status of the Guidance Document.

The Agency will make the determinations in the context of a modification of the operating permit required under 35 Ill. Adm. Code 602.102. The determinations will be subject to appeal to the Board. The Board notes that, in the event the Board fails to reach a decision on the permit appeal within the 120 day time limits, Section 40 of the Act provides for a mandamus, rather than a "deemed issued" default, only for RCRA, UIC and NPDES permits, not SDWA, air permits or non-hazardous waste permits. The Board notes that a default permit does not excuse the permittee from compliance with the Act or Board regulations; enforcement is precluded only insofar as operating without a permit (Marquette Cement v. PCB (1980), 84 Ill. App. 3d 434, 405 NE 2d 512; Illinois Power v. PCB (1983), 112 Ill. App. 3d 457, 462, 445 NE 2d 820, 824.) The Board also notes that, pursuant to Section 39 of the Act, failure of the Agency to timely act regarding RCRA permits has been construed by the Board as not leading to a default, in part based on the Board's "identical in substance" mandate. (Marathon v. IEPA, PCB 88-179; July 27, 1989) The Board strongly urges the Agency and USEPA to **comment**, particulary if there may be a need for statutory clarification.

This Subpart includes other determinations which appear only once, or a few times. These remain in the body of the regulations. Most of these are determinations which are subsidiary to the determinations which are addressed in these regulations. For example, in Section 611.132, the Agency may determine that, as a part of a determination as to whether filtration is required, that a failure of disinfection equipment was "caused by circumstances which were unusual and unpredictable."

The Board has proposed to have the Agency make these determinations, consistent with the general discussion above. These determinations apply to PWS's which already are subject to the permit requirement. They include specific standards. The Agency has authority, pursuant to Section 39 of the Act, to apply these standards in the context of permit issuance, subject to Board review.

As is discussed below, the new federal disinfection rules emphasize filtration as a means of achieving microbial quality in water, discouraging the use of disinfectant on unfiltered water. Section 611.128(a) is the determination as to whether filtration is required. This depends on eight criteria for avoiding filtration which are set forth in detail in Section 611.131 and 611.132, which are drawn from 40 CFR 141.71. These include: coliform and turbidity standards in source water; adequate disinfection; a watershed control program; annual inspection; absence of disease outbreaks; and, compliance with the total coliform and THM MCLs in the distribution system.

The filtration determination is back-referenced at numerous points in the June 29, 1989 Federal Register. 40 CFR 141.71 is entitled "Criteria for Avoiding Filtration". However, the USEPA rule does not ever get around to saying: "The State shall determine that filtration is required based on the following criteria..." Rather, this is stated in the preamble at 54 Fed. Reg. 27505. Fortunately, the preamble references into the body of the rules. The Board has placed a "Board note" after the text of Section 611.128(a) indicating that it is drawn from the Preamble, rather than the rules.

Where the USEPA rules back-reference the filtration determination, they

repeat the following litany: "... determined, in writing pursuant to Section 1412(b)(7)(C)(iii) (of the SDWA), that filtration is required." For example, see the preamble to 40 CFR 141.71. The cited SDWA Section merely confers jurisdiction on the Administrator and authorized states to make the determination; it does not specify any standards for the determination. The Board has omitted this reference since it is confusing and irrelevant at the State level. At the back-reference points the Board has cited instead to Section 611.128(a). Also, the "in writing" requirement is replaced with the permit action requirement in Section 611.128(d), and stated only once.

The disinfection rules, discussed below, generally require filtration of surface water sources and "groundwater sources under the direct influence of surface water". The Board has added Section 611.128(b) to specify the criteria which the Agency is to use to make this determination. Again, the federal rules make numerous back references to the determination, but fail to state the criteria. The term "groundwater under the direct influence of surface water" is defined in 40 CFR 141.2. However, the preamble has additional, and more specific criteria. (54 Fed. Reg. 27489). The preamble also refers to a draft Guidance Manual. The Board has consolidated the criteria in the definition and preamble into Section 611.128(b).

The definition in 40 CFR 141.2 includes two main criteria: significant occurrence of insects, algae or large-diameter pathogens, such as G. lamblia; or significant and relatively rapid shifts in in water characteristics, such as turbidity, temperature, conductivity or pH, which correlate with climatological or surface characteristics. The determination is to be based on site-specific measurements of water quality or documentation of well construction characteristics and geology. The preamble, 54 Fed. Reg. 27489, adds two other criteria which have been added to the Board regulations. The determination may consider structural modifications to eliminate the direct influence of surface water and prevent G. lamblia cyst contamination. (Section 611.128(b)(3)(C)) Also, the potential for contamination by small-diameter pathogens, such as viruses or bacteria, does not alone render the source "under the direct influence." (Section 611.123(b)(4)).

The Guidance Manual has a number of other criteria, and is more specific as to the criteria above. The Board has proposed language which attempts to place all of the decisional criteria into the regulations, but without being overly specific. The Section has been worded as "The Agency shall determine ... based upon ...", in order to allow the Agency freedom to weigh these factors to make an overall evaluation of whether a source is "under the influence".

The Guidance Manual is written from the point of view of a cost-effective decision tree, so that the State can determine obvious cases without requiring the collection of immaterial data. For example, the process starts with observing whether the source is a lake. If so, there is no point in collecting further data. The Board has tried to preserve this hierarchy in the order in which criteria are presented, but without setting out the full complexity of the decision process. The major headings of the criteria address, in the following order: physical characteristics; well construction; water quality records; rapid shifts in water quality; correlation with surface conditions; and particulate analysis.

Section 611.128(b)(4) is the criterion that a source under the influence of surface water is likely to have significant and relatively rapid shifts in water characteristics, including turbidity and temperature. The Guidance Manual specifies a range of 0.5 to 1 NTU and 15 to 20% of temperature change as indicative of surface influence. There are problems with these standards. First, does this mean that sources with even larger changes are not under the influence? Second, what does it mean for sources within the range? The Board has avoided these problems by proposing a regulation which uses the lower value of the range as indicative of surface influence. This is probably what USEPA means.

There is a worse problem with the temperature range. USEPA does not specify what units are to be used. Note that, since the Fahrenheit and Celsius scales are arbitrary units with arbitrary starting points, "15 to 20%" is going to represent a different physical situation depending on which scale is used. Moreover, a percentage change in temperature has meaning only in the absolute scales, such as Kelvin or Rankin. The following discussion assumes that groundwater has a temperature of around 60° F or 15°C. This would be around 288° K. A 20% change would be 58 Kelvin (which equal Celsius) degrees, a range that is larger than most encountered in surface water temperatures from season to season anywhere on the planet. Obviously the Manual means to use Celsius or Fahrenheit. The Board has proposed to use 2 Celsius degrees as the standard, corresponding to 15% of 15° C, but **solicits comment.** The alternative would be 9 Fahrenheit degrees (15% of 60° F), which is equivalent to 5 Celsius degrees.

As noted, the Board has proposed to place this determination into the context of permit modification. There are other alternatives. If "direct influence" is intended to cover only the situation in which PWSs draw water from shallow, fractured limestone, such as a karst terrain, the occurrence in Illinois is very limited. An efficient alternative might be to adopt a regulation which lists the areas of the State and/or formations which are likely to be "under the influence". Other areas would be presumed to be not "under the influence", minimizing the number of specific permit actions. This approach appears to be consistent with the USEPA guidance. However, it would require factual input so as to identify these areas. The Board **solicits comment.**

The new disinfection regulations, which are discussed below, include requirements that a PWS maintain a measurable residual disinfectant concentration (RDC) in the distribution system. RDC is measured either directly, or by a heterotrophic bacteria plate count (HPC). An HPC less than 500/ml implies a measurable RDC. (See Section 611.141(d)). HPC samples must be refrigerated and analysed within a limited time. (Standard methods, Method 907A). Several of the regulations below include an exemption from HPC sampling if the PWS has no means of analyzing for HPC and is providing adequate disinfection. For example, see 40 CFR 141.72(a)(4)(ii). The Board has collected these determinations into Section 611.128(c), which is back-referenced instead of repeating the lengthy federal language at each point.

This determination has been proposed as an Agency determination. However, it is less clearly an Agency permit determination than the two discussed above. Whereas the others allow the Agency to make a determination which places the PWS into the regulations for filtered or unfiltered supplies,

this determination exempts the PWS from the requirement to monitor the distribution system for RDC. As is discussed above, exemptions may require Board action. However, the PWS is still within the permit system. In order to obtain the exemption, the PWS has to make an alternative showing which includes demonstrating indirectly that it is maintaining a residual. Also, the exemption is from a detailed monitoring requirement, rather than from a standard. The Board has therefore proposed this as an Agency determination. The alternative would be an adjusted standard. The Board **solicits comment.**

The USEPA rules do not give any criteria for making the HPC determination. The criteria are discussed in the preamble at 54 Fed. Reg. 27495. Section 611.128(c) is largely based on the preamble.

The HPC determination has two major components: the inability to measure; and, maintenance of adequate RDC in the distribution system. The former has been phrased in terms of the inability to measure with time and temperatures specified in Standards Methods, Method 907A. It would be easy to go on and state the time and temperature conditions. However, the Board has avoided doing this out of fear that these might change in the future. Citing to Standard Methods avoids this problem, since the Board will routinely update the incorporations by reference Section to include revised methods.

The time and temperature showing includes consideration of transportation time to the nearest certified laboratory. (Section 4(o) of the Act) In addition, the Agency is to consider whether, based on the size of the PWS, it ought to establish in-house laboratory facilities. See the preamble at 54 Fed. Reg. 27495. This is not further elaborated.

The second portion of the showing includes a demonstration that the PWS is providing adequate disinfection in the distribution system. Note that the RDC level in the distribution system may not correlate with the RDC at the point of disinfection, since the former also depends on: the presence of organic material in the finished water; the residence time in the distribution system; and contamination from cross connections. In making the disinfection portion of the determination, the Agency is to consider: other measurements which show the presence of RDC in the distribution system; the size of the system; and the adequacy of the cross connection control program. See 54 Fed. Reg. 27495.

The HPC showing has a cart-before-the-horse problem. The HPC monitoring is supposed to show an adequate residual in the distribution system. However, to avoid HPC monitoring, the PWS has to show an adequate residual.

As is discussed below in connection with Section 611.141(d)(2), the entire HPC showing could be an error in the USEPA rules. HPC monitoring is an optional requirement in the first place: the PWS can either measure RDC or HPC to measure the presence of RDC. There is really no necessary connection between the inability to measure HPC and the inability to measure the presence of RDC: the PWS can easily measure RDC directly. However, the HPC demonstration is structured so as to exempt the PWS from RDC measurement as well. However, the PWS has to measure RDC to get the exemption. It's possible that this whole procedure should be removed from the rules. The Board **solicits comment.**

Section 611.129

This Section is derived from 40 CFR 141.70 (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It sets forth the general requirements for filtration and disinfection. These apply to PWSs using a surface water source or a groundwater source under the direct influence of surface water. The PWS must achieve a 99.9% removal or inactivation of G. lamblia cysts, and a 99.99% removal or inactivation of viruses, as between the raw water source and the first customer. A PWS is considered to be in compliance if it either meets the requirements for avoiding filtration, or if it meets the specific filtration and disinfection requirements discussed below.

40 CFR 141.70(c) requires that each PWS using a surface water source or groundwater under the direct influence of surface water be operated by personnel who meet requirements specified by the State. The Board has referenced the existing certification requirements of 35 Ill. Adm. Code 603.103.

Section 611.130

This Section is derived from the preamble to 40 CFR 141.71, as adopted at 54 Fed. Reg. 27526, June 29, 1989. It specifies times by which PWSs must meet the filtration requirements. Dates depend upon when the Agency determines that filtration is required, or that a groundwater source is under the direct influence of surface water.

Section 611.131

This Section is derived from 40 CFR 141.71(a) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It specifies the source water quality conditions which the Agency considers in determining, pursuant to Section 611.128(a), that filtration is required. The conditions are that the source water must be less than 20 fecal coliform bacteria per 100 ml, or less than 100 total coliform per 100 ml, and have a turbidity less than 5 NTU.

Section 611.131(b)(1) includes an exception from the turbidity condition if the Agency determines that the event was caused by "circumstances which were unusual and unpredictable". This determination would be made subsidiary to the determination as to whether filtration is required. (Section 611.128)

This Section is related to existing 35 Ill. Adm. Code 604.501(a-c) and 604.502(a-c).

Section 611.132

This Section is derived from 40 CFR 141.71(b) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It sets forth the "site-specific conditions" by which a PWS may avoid filtration. This is a part of the showing which the PWS must make pursuant to Section 611.128.

As provided by Section 611.132(a), a system which wants to avoid filtration must meet the disinfection requirements in Section 611.141, subject to certain exceptions. These Agency determinations are subsidiary to the

filtration determination in Section 611.128. The disinfection requirements are: inactivation of cysts and viruses; redundant disinfection equipment; an RDC of 0.2 mg/L entering the distribution system; and, a detectable RDC in the distribution system. (Section 611.142(a) - (d))

As provided by Section 611.132(b), system which wants to avoid filtration must maintain a watershed control program which minimizes the potential for contamination by G. lamblia cysts and viruses in the source water. This includes a requirement that the PWS acquire land or control rights in the watershed.

40 CFR 141.71(b)(2) includes a determination as to the adequacy of the program, which is made subsidiary to the filtration determination in Section 611.128. This includes a restatement of the purpose of the program to minimize cysts and viruses. The Board has deleted the second statement, and placed the final sentence into active voice.

As provided by Section 611.132(c), a system which wants to avoid filtration must have an annual on-site inspection to assess the disinfection process and watershed control program. This includes two subsidiary demonstrations.

The USEPA rules require that either the State "or a party approved by the State" perform the on site inspections (40 CFR 141.71(b)(3)). It is not obvious how this approval is to be given in Illinois. The Board has cited to Section 611.108, which allows units of local government to enter into delegation agreements pursuant to Section 4(r) of the Act.

40 CFR 141.71(b)(3) also requires that the inspection "indicate to the State's satisfaction" that the watershed control program and disinfection process are adequately designed and maintained. The Board has replaced this with "demonstrate" to avoid implying an unusual burden of proof or subjective standard.

As provided by Section 611.132(d), a system which wants to avoid filtration must not have been identified as a source of a waterborne disease outbreak. The system can continue to avoid filtration by modifications to prevent another such occurrence. The phrase "as determined by the State" has been deleted as redundant, in that this determination is made as specified in Section 611.128(a).

As provided by Section 611.132(e), system which wants to avoid filtration must meet the total coliform MCL of Section 611.360. This MCL involves a demonstration of the absence of colform bacteria, rather than a count standard. This includes an exemption by way of a subsidiary demonstration that the violation was not caused by a deficiency of treatment.

As provided by Section 611.132(f), system which wants to avoid filtration must meet the MCL for TTHM in Section 611.310. Note that filtration would remove organic material which interferes with disinfection and produces unnecessary THM.

This Section is related to existing 35 Ill. Adm. Code 604.501(a,b,d).

Section 611.133

This Section is derived from 40 CFR 141.71(c) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This states the treatment technique rule, which may be the subject of a violation. Under Section 611.133(a), a PWS violates the treatment technique requirement if it fails to install filtration by the date specified in Section 611.130, and either the Agency has determined that filtration is required, or the PWS fails to meet one of the above criteria for avoiding disinfection. Note that Section 611.130 allows time for installation of equipment after the Agency makes the determination.

Under Section 611.133(b), a PWS also may violate the treatment technique requirement if the source water turbidity exceeds 5 NTU, or if the system is a source of a waterborne disease outbreak.

This Section is related to existing 35 Ill. Adm. Code 604.203(e,1 a-e)

Section 611.140

This Section is derived from 40 CFR 141.72 preamble (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989 This Section specifies effective dates for the disinfection requirement. These run through 1991 and 1993 for various sources, or 18 months after Agency determinations regarding filtration or groundwater influence.

Section 611.140(c) allows the Agency to set interim disinfection requirements applicable between the time filtration is required and installed. This will be done by permit condition, as part of the filtration determination discussed above.

This Section is related to existing 35 Ill. Adm. Code 604.401(a), (b), (d), 604.402(b), 604.403(a) - (h), 604.404, 604.501(e), and 605.101.

As noted, the USEPA rules specify effective dates for disinfection, depending on the various Agency determinations. The USEPA rules are vague as to when and whether a groundwater source which is not "under the influence" has to add disinfection. Existing 35 Ill. Adm. Code 604.401 et seq. require chlorination, unless the CWS obtains an exemption pursuant to 35 Ill. Adm. Code 604.403. However, this exemption procedure has been superseded by the referendum procedure of Section 17(b) of the Act. One of the conditions for obtaining an exemption is that the CWS draws water from "a confined geologic formation". (Section 17(b)(2)). How does this relate to the USEPA "under the influence" standard?

As discussed above, the USEPA rules will require filtration and disinfection of surface water sources and "groundwater sources under the direct influence of surface water". The remaining class of water sources is groundwater sources not "under the influence". Does this include all "confined geologic formations", or are there some "confined geologic formations" which are "under the influence"? The Board suggests that the former alternative is the case: i.e. "confined geologic formations" is a more stringent standard than not "under the influence". Assuming this is true, there are the following categories of sources:

1. Surface water sources.

2. Groundwater sources under the direct influence of surface water.

3. Groundwater sources not "under the influence", but not into "confined geologic formations"

4. Groundwater sources into "confined geologic formations".

The following discussion assumes that the USEPA rules require disinfection of all but classes 3 and 4. Existing Board regulations require disinfection of all but class 4, and then only after meeting certain additional conditions, in Section 17(b) of the Act, which themselves serve to amend the existing Board rule which requires universal disinfection. The existing Board regulation requires disinfection of more sources, and is in this sense more stringent.

Section 7.2(b)(6) of the Act requires the Board to retain more stringent regulations which are consistent with USEPA rules. Is the disinfection requirement, and statutory exemption, consistent with the USEPA requirements?

Under the existing regulations, while the disinfection requirement is in the Board regulation, the exemption is in the statute. The statute provides:

> The Agency shall exempt from any mandatory chlorination requirement of the Board any community water supply which meets all of the following conditions. (Section 17(b) of the Act)

The language is keyed to "any mandatory chlorination requirement of the Board". It therefore appears that the exemption is not necessarily linked to the existing regulations, but could carry over to future chlorination requirements, including any disinfection requirement in this rulemaking.

Existing 35 Ill. Adm. Code 604.401 arguably can be construed as requiring "chlorination". However, the USEPA rules require only "disinfection". It is clear from several references in the rules and preamble that USEPA contemplates disinfection through the use of chlorine, chloramines, chlorine dioxide and/or ozone. The Board has the opportunity to clear up any ambiguity by construing its existing 35 Ill. Adm. Code 604.401 as allowing any form of disinfection, so long as a protective residual is maintained in the distribution system.

35 Ill. Adm. Code 604.401(a) requires the supply to maintain "residuals of free or combined chlorine at levels sufficient to provide adequate protection". While the Board rules may accommodate the use of ozone as a disinfectant, they do require the use of a chlorine residual. However, the USEPA rules include specific standards requiring the PWS to demonstrate the presence of RDC in the distribution system. However, "RDC" is defined in a manner which does not specify a chlorine residual. Furthermore, the presence of RDC can be shown by an HPC bacteria count less than 500/ml. This gives systems freedom to use alternative disinfection strategies, while being more specific as to the required level of RDC. Again, the Board construes its

existing rule as allowing any showing of a residual which provides protection equivalent to a chlorine residual.

The USEPA disinfection rules are a part of a comprehensive set of filtration/disinfection rules. Among other things, they are aimed at protecting public health from large-diameter pathogens which are resistant to chlorination, such as G. lamblia, and at limiting THM formation from chlorination with inadequate filtration. The Board's simpler chlorination requirement does not adequately address these considerations.

It is possible to make a simple change in existing 35 Ill. Adm. Code 604.401, and make it consistent with the new USEPA requirements. The Board has proposed to add language requiring "disinfection", rather than "chlorination" of all sources, unless the CWS obtains an exemption pursuant to Section 17(b). The Board **solicits comment** as to whether there is any provision which is inconsistent with statutory provisions.

Section 611.141

This Section is derived from 40 CFR 141.72(a) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This specifies the disinfection requirement for PWSs which do not provide filtration. The system must meet the general disinfection standard discussed above, i.e. inactivation or removal of 99.9% of cysts and 99.99% of viruses. These are calculated as specified in Section 611.141 and Appendix B.

Section 611.141(a)(1), derived from 40 CFR 141.72(a)(1), provides that, if a system uses a disinfectant other than chlorine, which is the disinfectant addressed by the larger tables in Appendix B, the PWS:

> ... may demonstrate to the Agency, through the use of an Agency-approved protocol for on-site disinfection challenge studies or other information, that ... values other than those specified in Appendix B ... or other operational parameters are adequate to demonstrate that the system is achieving minimum inactivation rates ...

This provision allows the Agency to approve an alternative method of demonstrating compliance with the inactivation standard specified in the Board regulation. The Board has proposed to eliminate subjective language from the USEPA rule (information "satisfactory to the Agency"). So modified, the regulation sets an objective standard which the Agency may apply in the context of permit issuance or modification, subject to Board review. The Board has proposed to add Section 611.141(a)(2) to so provide.

Section 611.141(b) requires that a PWS which does not provide filtration must have either redundant disinfection components, or an automatic shutoff of water in the event the RDC falls below 0.2 mg/L. The latter alternative is not allowed if automatic shutoff would "cause an unreasonable risk to health or interfere with fire protection."

Section 611.141(c) requires that, in a PWS which does not provide filtration, the RDC in water entering the distribution cannot fall below 0.2

mg/L for more than four hours.

Section 611.141(d) governs the RDC in the distribution system. Measurement is specified in Section 611.531 and 611.532 below. RDC must not be undetectable in the distribution system in more than 5% of samples in two consecutive months. RDC can either be measured, or inferred from an HPC bacteria count less than 500/100ml.

Section 611.141(d)(2), derived from 40 CFR 141.72(a)(4)(ii), provides that the detectable RDC requirement does not apply if the PWS has no method for having samples transported and analyzed for HPC, as discussed above in Section 611.128(c). There is a possible error in the USEPA rule, which clearly eliminates the entire detectable RDC requirement based on no HPC measurement. Even though a system could not measure HPC, it could measure RDC directly. It is possible that the USEPA was intended to reference only the portion of 40 CFR 141.72(a)(4)(ii) dealing with HPC. However, this would seem to render the HPC determination moot, since HPC measurements are optional in the first place. The Board **solicits comment** on this.

Section 611.142

This Section is derived from 40 CFR 141.72(b) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This Section specifies requirements for systems which do provide filtration. These differ from the requirements for those which do not filter mainly in that the filtered system is not required to have redundant disinfection components or an automatic shut-off of water in the event of disinfection failure. In addition, Section 611.141(a) does not specify how often the filtered system is to measure removal efficiency, an averaging rule or procedures for approval of alternative parameters. This latter difference could be an error by USEPA, since some rule on these seems necessary for the filtered system. The Board **solicits comment.**

Section 611.150

This Section is derived from 40 CFR 141.73 (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This Section specifies requirements for systems employing filtration. The standards differ depending on whether the system uses direct filtration, slow sand filtration, diatomaceous earth filtration or other technologies. These methods must achieve a turbidity level of 0.5 or 1 NTU, depending on the method. The Agency may allow as much as 5 NTU under various showings related to efficiency of disinfection at the higher turbidity levels. The Board has specified that these are to be made by way of permit condition. There is an ambiguity in the USEPA rule as to whether the general language of the slow sand demonstration in 40 CFR 141.73(b)(1) is intended to back reference the specific percent inactivation standard in 40 CFR 141.73(a)(1). If so, the reference should be specific. If not, the "no significant interference" in the latter standard may need better definition. The Board **solicits comment** on this.

Section 611.161

This Section is derived from 40 CFR 141.75(a) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It specifies reporting and recordkeeping requirements for unfiltered PWS's.

Section 611.162

This Section is derived from 40 CFR 141.75(b) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It specifies reporting and recordkeeping requirements for filtered PWS's.

Section 611.171

This additional State requirement is drawn from 35 Ill. Adm. Code 607.101. It requires the PWS to protect the system to prevent contamination during repair, reconstruction or alteration. The text has been reworded to conform with the usage of terms in this Part.

Section 611.172

This Additional State requirement is drawn from 35 Ill. Adm. Code 607.102. It requires the PWS to disinfect following repairs. The existing rule requires Agency approval of the disinfection procedure, and allows the PWS to follow the plan until the Agency notifies it that the procedure is no longer satisfactory. The Board has proposed to simply make this a permit condition. Having done this, there is no need for a specific modification procedure.

NON-CENTRALIZED TREATMENT DEVICES

Section 611.180

This Section is derived from 40 CFR 141.100 (1987), as amended at 52 Fed. Reg. 25712, June 8, 1987, and at 53 Fed. Reg. 25109, July 1, 1988. This Section concerns "point-of-entry devices", such as activated charcoal filters at residences. If these are used to meet MCL's, then it is the PWS' responsibility to operate and maintain the devices.

40 CFR 141.100(c) requires the PWS to have a State-approved monitoring plan before installing point-of-entry devices. The Board has proposed to require that this plan be approved as a permit condition.

40 CFR 141.100(c)(2) provides that "In addition to the VOCs, monitoring must include physical measurements ..." As discussed above, the Board has proposed to define "VOC" as "volatile organic compound", which is presumably what is intended here. This makes some sense in that one might want to monitor an activated carbon unit by measuring VOC's. However, the rule applies to other types of treatment. The Board **solicits comment.**

Section 611.190

This Section is derived from 40 CFR 141.101 (1987). It allows the use of bottled water or "point of use" devices to achieve compliance with an MCL only on a temporary basis.

MAXIMUM CONTAMINANT LEVELS (MCL's)

Section 611.300

This Section is derived from 40 CFR 141.11 (1987). This Section contains the MCLs for inorganic chemicals.

This Section is related to existing 35 Ill. Adm. Code 604.202 and 604.203(a) and (b). The existing State MCLs are generally the same as the USEPA MCLs. However, the State regulations include MCLs for the following additional parameters: copper, cyanide, iron, manganese and zinc. These have been placed in the same table as the federal MCLs, but have been marked with an asterisk as additional State requirements.

According to 35 Ill. Adm. Code 604.202, the State MCL for fluoride is 1.8 to 2.0 mg/L. However, Section 17.6 of the Act requires that the State MCL be the same as the USEPA MCL for this parameter. The more stringent State MCL is therefore void. Section 17.6 mandates the same MCL's for barium and radium also. However, these standards are the same in the 40 CFR 141 and 35 Ill. Adm. Code 604 anyway.

The Board has inserted the 4.0 mg/L USEPA MCL into the table. The USEPA MCL for fluoride is actually addressed in 40 CFR 141.11(c), rather than in the Table. This is to allow a reference to the secondary MCL in 40 CFR 143. However, the secondary MCL is for policy guidance only, and has no real function in the State program. The Board has therefore omitted this reference.

40 CFR 141.11(d) allows the State to raise the nitrate MCL for non-CWS's to 20 mg/L under certain conditions, including a demonstration that water will not be available to small children. As is discussed above, non-CWS's represent a small class of PWS's which serve persons less than 60 days out of the year. In that there is no preexisting State regulation which allows an increase in the nitrate MCL, the Board has proposed not to exercise the discretion allowed under 40 CFR 141.11(d).

The Board has left holes in the subsection numbering for 40 CFR 141.11(c) and (d). This will avoid confusion in the future as to whether the subsequent additional State requirements are related to these provisions.

Section 611.300(e) is an exception for the additional State requirements for iron and manganese. This is drawn from existing 35 Ill. Adm. Code 604.203(b). This limits the iron and manganese MCL's to CWS's serving a population over 1000 or more than 300 service connections.

Existing 35 Ill. Adm. Code 604.203(b) uses the term "community water supply". This is not defined in the existing Board regulations. The proposal assumes that it is intended to have the meaning of "CWS" in the USEPA rules, and has therefore used the defined term without qualification. The Board **solicits comment** on this.

Section 611.300(e)(2) allows the Agency to approve levels of iron and manganese which are higher than the State MCL's. The Board has proposed to modify the language to make it clear that these approvals are to be a part of the permit process.

Section 611.310

This Section is derived from 40 CFR 141.12 (1987). It establishes MCL's for organic chemicals. These include pesticides and trihalomethanes (THM or TTHM)

The USEPA rule includes chemical names for many of the pesticides. It is difficult to produce a table meeting Administrative Code Unit format rules with the long names in it. The Board has therefore added Appendix C, which defines the shortened names by reference to the long names. The federal rule also redefines "trihalomethanes" inside the table. This is already defined in the definitions in 40 CFR 141.2 (Section 611.101)

This Section is related to existing 35 Ill. Adm. Code 604.202 and 604.203(d)(2).

35 Ill. Adm. Code 604.202 sets MCL's for six additional pesticides. These have been inserted into the Table, and have been marked as additional State requirements. The existing State MCL for 2,4-D, 0.01 mg/L, is also more stringent than the USEPA standard of 0.1 mg/L. The Board has inserted the more stringent State MCL into the Table, and similarly marked it.

The State MCL's for pesticides are expressed by common names, without full chemical names. The Board has proposed to add full chemical names in Appendix C.

The preamble to 40 CFR 141.12 provides that the THM MCL applies only to CWS's which serve over 10,000 individuals and which add a disinfectant. 35 Ill. Adm. Code 604.202 and 604.203(d)(2) set the same standard for the same size "supply", but without qualification as to whether disinfection is applied. The Board therefore regards its THM standard as a more stringent State requirement, and has proposed to so mark it.

In R84-12 the Board is moving toward final adoption of a proposal to remove the 10,000 persons served limitation from this MCL, and to prescribe a new method of measuring the parameter. Assuming this is adopted before R88-26, the Board will revise this Section to reflect the new requirements before final adoption, or in a later Docket.

Section 611.320

This Section is derived from 40 CFR 141.13 (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. Note that the turbidity standards will, at least to some extent, be replaced by the new disinfection rules as the compliance dates for those rules pass.

This Section is related to existing 35 Ill. Adm. Code 604.202 and 604.203(e). These appear to be largely the same as the USEPA rules. They have been entirely replaced with the USEPA language.

The USEPA rules use both "NTU" and "TU" as turbidity units. The Board **solicits comment** as to whether there is any difference.

The USEPA rule allows the State to approve turbidity limits from one to five TU if the PWS demonstrates that the higher level does not: interfere

with disinfection; prevent maintenance of an effective residual; and, interfere with microbial determinations. The Board construes this as a case-by-case "waiver" provision, since it requires an individual supplier to make the demonstration. The Board has inserted language to make it clear that this is to be done by way of permit application. As is discussed in general above, the Agency has authority pursuant to Sections 4 and 39 of the Act to make these determinations in the context of permit issuance. The PWS is already in the permit system. The regulation allows the Agency to set a numerical limit within a range set by Board regulation, pursuant to an objective standard which is subject to Board review.

An alternative reading of this provision is that it allows a PWS to establish an after-the-fact defense in the event it is charged with exceeding the turbidity standard. The Board proposes to reject this interpretation. 40 CFR 141.13(a) appears to be setting a prospective design standard which a PWS should comply with in designing equipment. It contains no factors, such as equipment malfunction, which one would expect to see in an Section which created an after-the-fact defense to enforcement.

Section 611.330

This Section is derived from 40 CFR 141.15 (1987). This is the standard for radium and gross alpha particle activity.

This Section is related to existing 35 Ill. Adm. Code 604.301, which sets the same standards. In addition, Section 17.6 of the Act requires that the Board have identical standards.

Section 611.331

This Section is derived from 40 CFR 141.16 (1987). This is the standard for beta and photon radiactivity from man-made radionuclides.

This Section is related to existing 35 Ill. Adm. Code 604.302. This is the same as the USEPA Section.

REVISED MCL's

Section 611.340

This Section is derived from 40 CFR 141.61 (1987), as amended at 52 Fed. Reg. 25712, June 8, 1987. This Subpart contains the "national revised MCL's".

What is the difference between an MCL and a "national revised MCL"? The preamble discusses MCLG's, NDDWR's, MCL's, treatment techniques and BAT's, but never mentions "national revised MCL's". (52 Fed. Reg. 25691, July 8, 1987). The Board assumes that a "national revised MCL" is the same as an "MCL"; but, USEPA is placing into a separate Section MCL's adopted after the 1986 SDWA amendments. This may be in part because of different "variance" requirements under Sections 1415 and 1416 of the SDWA, and the requirement to specify an MCLG.

Assuming a "national revised MCL" is the same thing as an MCL, is there

any need to keep these standards separate in the State regulations? Would it simplify the regulations to consolidate these lists? the Board **solicits comment** on this.

There are a number of problems with the wording of 40 CFR 141.61. The introduction refers to "organic contaminants". However, 40 CFR 141.61(b) gives BAT's for "synthetic organic chemicals". Worse, the associated monitoring requirements in Section 611.648 refer to "VOC's", which, although undefined, presumably means "volatile organic compounds". The preamble also refers to these as "VOC's" (52 Fed. Reg. 25691, July 8, 1988).

There are obvious problems with having three names for a list of chemicals, especially if two are undefined. The Board has therefore proposed to replace the terms "synthetic organic chemicals" and "VOC's" with the best term, "organic contaminants". "Synthetic organic contaminants" is not a very good descriptor, since one of these chemicals, benzene, is a naturally occurring feedstock in oil and coal. "VOC's" is not very good either, since these compounds are not a drinking water problem because of their volatility, but rather because of their carcinogenicity. The term "VOC" would be misleading if non-volatile organics with similar toxicity were added to the list.

Section 611.350

This Section is derived from 40 CFR 141.62 (1987). It sets "national revised MCL's" for inorganics. The only present standard is for fluoride. Indeed, the standard, 4.0 mg/L, is the same as the MCL in Section 611.300. Again, the question is whether this distinction is needed in the State regulations.

Section 611.360

This Section is derived from 40 CFR 141.63, as adopted at 54 Fed. Reg. 27562, June 29, 1989. It sets a presence-absence (P-A) standard for total coliform. A PWS is in compliance if no more than 5.0% of samples are coliform positive in a month. Systems which take fewer than 40 samples are allowed one positive sample. Sampling frequency is governed by Section 611.521. Analytical methods are prescribed in Section 611.526. Presumably the P-A test is easier to carry out than a bacterial count.

This Section is related to old 35 Ill. Adm. Code 604.102, which sets numerical limits for total coliform. Although it is possible that these are more stringent than the P-A standard, the Board does not have a factual record to make a determination as to stringency. In any event, the numerical standards are inconsistent with the P-A coliform limits, which are essential to the filtration and disinfection regulations above. Section 7.2(a)(6) allows the Board to retain only those more stringent regulations which are consistent with USEPA rules.

MCL GOALS

Section 611.380

This Subpart sets MCL goals (MCLG's). In that these are really policy

statements required of USEPA by the SDWA, the Board **solicits comment** as to whether they are needed in the State program.

This Section is derived from 40 CFR 141.50 (1987). It sets MCLG's of zero for five organic contaminants, and numerical levels for three others.

Section 611.390

This Section is derived from 40 CFR 141.51 (1987). It sets an MCLG of 4.0 mg/L for fluoride.

Section 611.400

This Section is derived from 40 CFR 141.52 (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. It sets MCLG's of zero for G. lamblia, viruses and legionella.

GENERAL MONITORING REQUIREMENTS

Section 611.480

This Section is derived from 40 CFR 141.27 (1987), which allows USEPA to approve alternate analytical techniques which are substantially equivalent in "both precision and accuracy". The Board has proposed to allow the Agency to approve alternate analytical techniques, on a case-by-case basis, by way of permit condition. The Board has provided that the Agency may not grant such conditions without the concurrence of USEPA.

An alternative reading of 40 CFR 141.27 is that it authorizes the State to adopt regulations specifying alternative analytical requirements, in which case USEPA approval would come through the program approval process. The Board **solicits comment** as to which reading is correct.

This Section is related to existing 35 Ill. Adm. Code 605.110, which says pretty much the same thing.

Section 611.490

This Section is derived from 40 CFR 141.28 (1987), which requires analyses to be performed in laboratories approved by the State. The Board has cited to the Agency's laboratory certification authority in Section 4(o) of the Act, and **solicits comment** as to whether the Agency has adopted implementing regulations appropriate for this type of certification.

The proposed formulation would not allow analyses to be used in Illinois if performed by a laboratory certified only by USEPA. The Board also **solicits comment** as to whether there is a need for such a provision.

The USEPA Section also allows that certain simple measurements, such as pH, may be made by "any person acceptable to the State". The Board has proposed to allow any person under the supervision of a certified operator to make these measurements, but **solicits comment.**

This Section is related to existing 35 Ill. Adm. Code 605.101(c) and

607.105(b). The former provides that it is the duty of the PWS to have compliance samples analyzed either at a its own or another certified laboratory. This is an obvious requirement which may be missing in the USEPA rules. It has been moved to Section 611.490(c). 35 Ill. Adm. Code 607.105(b) says the same thing as Section 611.490(a)

Section 611.491

This Section is drawn from 35 Ill. Adm. Code 607.105(a) and (c). This requires each PWS to have adequate laboratory equipment to perform operational tests, and allows control tests to be performed at an uncertified laboratory. These provisions appear to be additional, consistent State requirements.

Section 611.492

This Section is drawn from 35 Ill. Adm. Code 604.204. This contains a general averaging rule, and reporting and notification requirements. It has been retained to state a general rule on what to do about a violation of the State MCL's, which have above been added to the federal. Language has been added to the effect that this Section applies only to additional State requirements for which no specific monitoring, reporting or public notice requirements are specified. Note that this winds up being the same as the USEPA monitoring requirement in some cases discussed below, so that there may be no need to retain this as a general rule. The Board **solicits comment.**

Section 611.493

This Section is drawn from 35 Ill. Adm. Code 605.103. It specifies the frequency of monitoring for additional State MCL's, in the absence of a more specific rule.

Section 611.500

This Section is derived from 40 CFR 141.29 (1987). It allows the Agency to modify, by permit condition, monitoring requirements for consecutive PWSs, to the extent their interconnection justifies treating them as a single PWS. The Agency cannot issue such a permit without concurrence from USEPA.

This Section is related to existing 35 Ill. Adm. Code 604.204, 604.402(a) and 605.109(a), which say pretty much the same thing.

MICROBIOLOGICAL MONIORING

This Subpart specifies the requirements for microbial monitoring. As is discussed in general above, the Board has proposed to determine stringency and consistency with respect to the MCLs and required treatment techniques. After determining whether State or federal law is controlling at this level, the Board will propose to adopt the monitoring and notice requirements associated with the controlling law, without further comparison of stringency.

The Board has above determined that, although the USEPA filtration and disinfection requirements are in a sense less stringent than the existing Board rules, which arguably require chlorination and maintenance of a residual

in virtually all systems, the existing rules are inconsistent with the more detailed federal rules, which address filtration, allow other means of disinfection, and specify a standard for RDC in the distribution system. The Board has therefore proposed to follow the federal rules with respect to microbiological monitoring. Attached to the Proposed Opinion is a cross-reference table showing the relationship with existing Board monitoring requirements. However, the Board has not undertaken any detailed comparison at this level in the Proposed Opinion.

Note that the situation with respect to disinfection is more complex than for the parameters discussed below. As discussed above, there may be a category of PWS's which would not be required to disinfect under the federal program, but which are required to disinfect under the existing and proposed Board rules. The general approach discussed above would arguably require the Board to retain the existing monitoring requirements for this class of PWS. However, to do so would introduce vast complexity into the proposal. The Board has instead proposed to require the federal monitoring for this class of PWS, but **solicits comment.**

The monitoring requirements include a large number of "waiver" provisions. As is discussed in general above, PWS's are subject to a comprehensive permit program. All of the monitoring requirements should be specified in the PWS's permit. Generally the Board has specified that any "waivers" are to be addressed by way of permit condition. Note that a permit condition will necessarily be in writing and signed by a responsible Agency official. Therefore, the Board has dropped as unnecessary many detailed requirements as to the form these "waivers" must take.

A few of the monitoring "waivers" appear to represent emergency response situations. For example, some provisions require resampling in response to MCL exceedances, except in certain situations. These "waivers" the Board has proposed to allow the Agency to handle outside the permit system. The Board **solicits comment** as to whether formal procedures need to be specified.

Some "waivers" seem to occupy an intermediary position between a design change which should be approved by permit condition, and an emergency response. For example, a provision which requires resampling within 30 hours, unless the PWS cannot resample within that time. One way of looking at this is that each PWS is to take steps from the time of permit issuance to be prepared to resample within 30 hours should the need arise. If there is something about the system which will prevent such resampling, the PWS needs to specify in a permit application, so that the Agency can specify an alternative. A second way of looking at this is that it is intended to allow "waivers" after the 30 hour resampling is required, based on unanticipatable events, in which case it is an emergency action. A third possibility is that the provision is an after-the-fact excuse provision which would create a defense in an enforcement action. Wherever possible the Board has proposed to follow the first alternative, to place these decisions squarely into the Agency's permit authority. The Board **solicits comment** as to whether another sense is intended.

Section 611.521

This Section is derived from 40 CFR 141.21(a) (1987), as amended at 54

Fed. Reg. 27562, June 29, 1989. This Section specifies the frequency of monitoring for total coliform.

40 CFR 141.21(a)(1) requires a "written sample siting plan. These plans are subject to State review and revision". In Section 611.521(a) the Board has proposed to require a written plan, which "must be approved as a permit condition."

Section 611.521(b) includes the table of required monitoring frequencies for CWS's. This is almost the same as under existing 35 Ill. Adm. Code 605.102. The Board has proposed to drop the population ranges from the table as unneccesary and confusing. As formated in the proposal, a CWS with a population more than the amount in the left hand column must take the minimum number of samples in the right hand column.

40 CFR 141.21(a) includes numerous references to the determination that groundwater is under the influence of surface water. The Board has referenced Section 611.128 for this determination.

40 CFR 141.21(a)(3)(iii) has an ambiguity which is preserved in Section 611.521(c)(3). This requires a non-CWS using surface water to monitor at the same frequency as a like-sized CWS, "regardless of the number of persons it serves". However, the monitoring frequency for CWS's is based on the number of persons served (their "size"). The Board **solicits comment** as to whether this provision needs fixed.

Section 611.521(e) includes an intermediate type of "waiver" provision discussed in general at the beginning of the Microbial Monitoring Subpart. This allows the Agency to "waive" a 30 hour resample requirement if the PWS cannot have the sample analyzed "for logistical reasons outside the PWS's control". The Board has proposed this as a permit type waiver which must be granted in advance, but **solicits comment.**

Section 611.522

This Section is derived from 40 CFR 141.21(b) (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. It governs repeat coliform monitoring, which is required following a coliform positive sample.

This Section includes many "waivers". Most of these appear to arise within the context of a "boil order". The Board has proposed most of these as Agency actions outside the permit system, but **solicits comment** as to whether procedures need to be specified.

Section 611.523

This Section is derived from 40 CFR 141.21(c) (1987), as amended at 54 Fed. Reg. 27562, June 29,1989. This Section governs the invalidation of total coliform samples. 40 CFR 141.21(c)(1)(iii) allows the State to invalidate a sample if "the State has substantial grounds to believe" that a positive result is due to a circumstance which does not reflect water quality in the distribution system. In Section 611.523(a)(3) the Board has proposed to replace this with "the Agency determines", so as to avoid specifying a subjective standard or unusual standard for proof. Note that, under the

federal rule as written, the question on review would be, "what did the Agency believe?" Whether the result was in fact positive or negative would be irrelevant.

Section 611.524

This Section is derived from 40 CFR 141.21(d) (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. This Section requires "sanitary surveys" of CWS's which collect fewer than 5 routine coliform samples per month. Under Section 611.521, this would be systems with fewer than 4100 persons served. The initial survey is required in 1994 for CWS's, and in 1999 for non-CWS's. The survey must be repeated every five years thereafter, except for "non-CWS's using only protected and disinfected groundwater, as defined by the State". The Board has proposed to use the "not under the direct influence of surface water" determination in Section 611.128, but **solicits comment.**

Section 611.524(a)(2) allows the use of data collected in developing and implementing a "wellhead protection program". This term is defined above.

40 CFR 141.21(d)(2) requires that the sanitary survey be performed by the State "or an agent approved by the State." The Board has proposed to allow delegated units of local government to conduct the surveys, but **solicits comment.** (See Section 611.103)

Section 611.525

This Section is derived from 40 CFR 141.21(e) (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. If a sample is coliform positive, the system must reanalyze the culture to see if fecal coliform or E. coli are present.

Section 611.525(b) allows the Agency to allow a PWS, on a case-by-case basis, to forgo fecal coliform or E. coli testing, if it assumes that a coliform positive sample is also positive for these parameters. This would then constitute a violation of the MCL.

Section 611.526

This Section is derived from 40 CFR 141.21(f) (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. This Section specifies the analytical methods to be used for microbiological analysis. Note that the text uses abbreviated names for sources, which are set out at length in the incorporations by reference Section.

40 CFR 141.21(f)(5) modifies certain "EPA approved methods" The Board construes this as a back reference to the references in the preceding paragraph which are published by USEPA, i.e. "Microbiological Methods for Monitoring ...". Section 611.526(e)(2) has been worded to reference "Microbiolgical Methods" directly. However, it is possible that the USEPA provision is intended to modify all of the preceding references, including the ASTM and Standard Methods. The Board **solicits comment.**

Section 611.527

This Section is derived from 40 CFR 141.21(f) and (g) (1987), as amended

at 54 Fed. Reg. 27562, June 29, 1989. The PWS has to report a coliform violation on the next business day, and report to the public as specified in Subpart T.

Section 611.531

This and the following Sections are drawn from 40 CFR 141.74, which specifies the analytical methods for compliance with the filtration and disinfection rules. These have been included with the microbiological methods, to which they are closely related. Note, however, that they do specify methods for measurement of non-biological parameters also.

This Section is derived from 40 CFR 141.74(a) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989 40 CFR 141.74 provides for alternate methods "otherwise approved by the EPA". The Board has proposed to allow alternate methods approved by the Agency under Section 611.480, but **solicits comment.**

The Board has also proposed to allow simple measurements, such as pH or RDC, to be conducted by a certified operator. More complicated analyses, including bacterial, must be performed by a certified laboratory. Pending recertification pursuant to new standards, any laboratory certified for total coliform is deemed certified for fecal coliform and HPC (heterotrophic plate count). Again the Board has assumed that all of this will be delegated, and the the Agency will take over laboratory certification for this program, but **solicits comment.**

Section 611.532

This Section is derived from 40 CFR 141.74(b) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This specifies the monitoring requirements for PWS's which do not provide filtration. This Section is closely linked to the Agency determinations in Section 611.128, which have been referenced instead of repeating the standards for the determinations.

40 CFR 141.74(b)(2) allows a PWS to use continuous turbidity monitoring "using a protocol approved by the State". The Board has proposed, in Section 611.532(b), to place this into the permit issuance process.

40 CFR 141.74(b)(3) et seq. govern the measurement of the inactivation ratio at the point of disinfection. Note that the tables listing CT99.9 have been moved to Appendix B. Note also that the text at 54 Fed. Reg. 27534 is scrambled. As is discussed above, the Board has avoided typing problems by shortening the symbols used in the formulas.

As discussed in Subpart B above, the USEPA rules include a treatment requirement which requires 99.9% removal or inactivation of G. lamblia cysts. To demonstrate compliance with this standard the PWS has to measure pH, temperature, contact time and RDC concentration for each disinfection process. The PWS measures these, and calculates the total inactivation ratio pursuant to this Section.

The values in Appendix B are mainly for chlorine. Section 611.532(c)(5) allows a PWS using an alternative disinfectant to establish altenative protocols. The Board has proposed to reference the alternatives in Section

611.141, instead of repeating similar language here. Those Sections require alternatives to be specified by permit condition.

40 CFR 141.74(b)(6)(ii), which is reflected in Section 611.532(f)(2), appears to exempt the PWS from monitoring RDC in the distribution system if the PWS shows that it cannot analyze for HPC. As is discussed in connection with the determination in Section 611.128, there are questions as to what this means, and whether it is a good idea.

Section 611.533

This Section is derived from 40 CFR 141.74(c) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. It governs monitoring by systems which use filtration. The monitoring requirements are less strict than for PWS's which do not filter.

TURBIDITY MONITORING

Section 611.560

This Section is derived from 40 CFR 141.22 (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This Section governs turbidity monitoring. Note that there are additional turbidity monitoring requirements with the microbiological monitoring requirements. Those requirements appear to replace this Section after the dates disinfection and filtration are required.

40 CFR 141.22(a)(2) allows calibration of the turbidimeter either according to cited references, or by use of a commercially available calibration styrene divinylbenzene polymer standard. The APA does not authorize the incorporation by reference of a private physical standard. This type of reference would delegate to the private entity the authority to change the substance of the rule by changing the composition of the standard. The Board has deleted this reference, but solicits comment as to whether their might be a document, which meets APA conditions, and which describes this analytical standard.

40 CFR 141.22(e) authorizes the State to initiate enforcement. This has been made a global rule in Section 611.109.

INORGANIC MONITORING

This Subpart governs inorganic monitoring. Unlike the preceding Subparts, there are additional State MCL's for inorganic contaminants. (Section 611.300) These include: copper, cyanide, iron, manganese and zinc. There may be additional State requirements governing monitoring for these parameters which should be preserved according to the general approach discussed above. However, for the sake of simplicity, if the existing State rule is very similar to the federal rule for all inorganic MCL's, the Board has simply extended the USEPA rule to cover the additional parameters. Some general State monitoring rules have been retained in Section 611.480 et seq. More specific rules are contained in this Subpart.

Section 611.601

This Section is derived from 40 CFR 141.23(a) through (e) (1987), as amended at 53 Fed. Reg. 5146, February 19, 1988. This specifies the monitoring requirements for inorganic chemicals.

This Section is ambiguous in specifying monitoring for "surface" and "groundwater" sources. How often do surface sources "under the influence" have to monitor?

This Section is related to existing 35 Ill. Adm. Code 604.203 and 605.103. The latter establishes a schedule for "chemical analysis" of raw and finished water from CWS's. Surface water sources are to monitor annually, while groundwater sources are to monitor every three years. Fortunately this is the same as the federal rule. (Section 611.601(a)(1) and (2)) The Board has added a note to make it clear that the general federal rule applies to the additional State MCL's.

As discussed in connection with Section 611.300, the USEPA MCL of 10 mg/L for nitrate is the same as the existing Board MAC in 35 Ill. Adm. Code 604.202. The Board has therefore based the rule on the USEPA MCL, and hence also the monitoring requirement. However, 40 CFR 141.23(a)(3) allows the State to set nitrate monitoring frequencies for non-CWS's. Nitrate monitoring is governed by existing 35 Ill. Adm. Code 604.203 and 605.103. The latter applies only to CWS's. There appear therefore to be no existing Sate law requiring nitrate monitoring for non-CWS's. The Board has therefore proposed to leave this with a general direction to the Agency to set monitoring frequencies by permit condition for nitrate for non-CWS's, but **solicits comment.**

40 CFR 141.23(a)(4) has been made a global rule on enforcement in Section 611.109.

40 CFR 141.23(b) and (c) specify additional sampling, averaging and reporting rules for inorganic parameters. These are basically the same as existing 35 Ill. Adm. Code 604.202, which is stated in general in Section 611.492. The Board has therefore proposed to make the USEPA derived rule applicable to the additional State parameters, and has dropped a note to that effect.

40 CFR 141.23(c) includes a reference to monitoring schedules as a condition of a "variance, exemption or enforcement action". The comparable State procedures are referenced in Section 611.601(c). These are variance, adjusted standard and enforcement action.

40 CFR 141.23(e) has been omitted from the proposal, since it was a transitional rule allowing the use of pre-existing data when the USEPA rule was first adopted.

Section 611.606

This Section is derived from 40 CFR 141.23(f) (1987), as amended at 53 Fed. Reg. 5146, February 19, 1988. It specifies analytical methods. Note that the Board rule uses abbreviated names which reference into Section 611.102, incorporations by reference.

This Section is related to existing 35 Ill. Adm. Code 604.104, which includes a broadside reference to methods approved by USEPA or the Agency. It is doubtful whether this would be acceptable to JCAR under the current APA. The Board has therefore proposed to add test methods for the additional State parameters, and **solicits comment** as to whether these are correct, or whether additional methods need to be referenced.

Section 611.607

This Section is derived from 40 CFR 141.23(g) (1987), as amended at 53 Fed. Reg. 5146, February 19, 1988. It governs fluoride monitoring.

This Section is related to existing 35 Ill. Adm. Code 604.202 and 604.203. However, in that Section 17.6 of the Act mandates that the Board follow the USEPA standard, the Board has proposed to follow the USEPA monitoring rules.

The provisions of the USEPA rule include a number of "waiver" provisions. The Board has generally proposed to place these into the context of Agency permit actions, which will necessarily be formal, written determinations. The Board has omitted the requirement of Agency notice of these decisions to USEPA, since this can be provided for in the memorandum of agreement between the agencies.

40 CFR 141.23(g)(4) limits laboratories to those which have successfully analyzed "performance evaluation samples" within the last 12 months. This provision is evidently referencing into a body of laboratory certification rules with which the Board is not familiar. This may need to be elaborated in the final rules. The Board **solicits comment.**

Section 611.610

This Section is derived from 40 CFR 141.41 (1987). This Section requires special monitoring and reporting concerning sodium. Note that there is no MCL for sodium. This Section just requires monitoring, and special public notification if the level is excessive. Sodium is associated with high blood pressure, but ordinary treatment will not lower the levels. The notification allows people with restricted sodium intact to seek alternative water sources.

This and the following USEPA rules are applicable to "suppliers of water for community public water systems", an extreme example of USEPA's frequent apparent deviation from the use of defined terms. The Board has replaced this with "CWSs". It's hard to imagine what else it could mean, but the Board **solicits comment.**

40 CFR 141.41(b) requires the CWS to report at the end of the required monitoring period, "or as stipulated by the State". In Section 611.610(b), Board has proposed to reference the monitoring frequencies specified by permit condition.

40 CFR 141.41(c) requires notification of "the appropriate local and State public health officials". In Section 611.610(c), Board has proposed to require notification of the Agency and local health officials. The Board **solicits comment** as to whether there may be other appropriate State agencies,

and as to whether their may be a more specific reference to the local official entitled to notice. In addition, the USEPA rule allows the State to assume the local notification responsibility. The Board **solicits comment** as to whether it should exercise this discretion, by requiring the Agency to give this notice.

Section 611.621

This Section is derived from 40 CFR 141.42(a) and (b) (1987). This requires monitoring for corrosivity charcteristics. Again, there is no MCL associated with this monitoring. The CWS just has to monitor and report.

Corrosivity tends to be associated with high sodium content, the subject of the preceding Section. Corrosive water shortens the life of pipes and equipment. Worse, the degradation products, including lead, wind up in the water.

The USEPA rule includes a number of "waiver" provisions, which have generally been placed into the context of the permit system. 40 CFR 141.42(a)(1) authorizes the State to require additional sampling, but specifies no standard. 40 CFR 141.42(a)(2) also authorizes the State to require monitoring for additional parameters related to corrosivity, again without any standard. The Board has not proposed to exercise these options, but **solicits comment.**

Section 611.623

This Section is derived from 40 CFR 141.42(c) (1987). This specifies the analytical methods for corrosivity.

Section 611.624

This Section is derived from 40 CFR 141.42(d) (1987). It requires CWS's to identify whether certain construction materials, such as lead, are present. 40 CFR 141.42(d)(2) allows States to require identification of certain additional construction materials. The Board has not proposed to exercise this discretion, but **solicits comment.**

ORGANIC MONITORING

This Subpart deals with organic monitoring. Note that there are both MCLs (for pesticides) and revised MCLs for (other) organics, in Section 611.310 and 611.340. As is discussed above, with respect to the MCLs, the existing Board regulations include more stringent MCL's and additional parameters. Monitoring is therefore subject to considerations similar to the inorganics, as is discussed above.

Section 611.641

This Section is derived from 40 CFR 141.24(a) through (d) (1987), as amended at 53 Fed. Reg. 5146, February 19, 1988. This specifies the monitoring frequencies for the pesticides in Section 611.310.

40 CFR 141.24(a)(1) and (2) appear to defer to the State as to the

required frequencies for pesticide monitoring. The Board has therefore drawn on the existing general provision of 35 Ill. Adm. Code 605.103, which requires CWSs to monitor annually for surface supplies, and every three years for groundwater. The Board has dropped a note to provide that this pre-existing requirement applies also to the additional State requirements.

Section 611.645

This Section is derived from 40 CFR 141.24(e) and (f) (1987), as amended at 53 Fed. Reg. 5146, February 19, 1988. This specifies the analytical methods for the pesticides. The Board **solicits comment** as to whether the methods cited include methods for the additional State requirements in Section 611.310.

Section 611.648

This Section is derived from 40 CFR 141.24(g) (1987), as amended at 52 Fed. Reg. 25712, July 8, 1987, and 53 Fed. Reg. 25109, July 1, 1988. This Section governs monitoring for the "organic contaminants" in the revised MCL's in Section 611.340.

As is discussed above, 40 CFR 141.61 refers to these contaminants by three names: "organic contaminants", "synthetic organic contaminants" and "VOCs". The rule appears to be referring to the same thing. The Board has changed all of these to "organic contaminant", which, as is discussed above, is the best choice. "VOCs" appears to be USEPA's choice in 40 CFR 141.24(g), probably because the analytical techniques depend on volatility. However, this is still an undesirable name, since the parameters are being regulated for toxicity which is independent of volatility.

The revised MCL in Section 611.340 applies only to CWS's. The Board has therefore used "CWS" in stating the monitoring requirement, in place of the various synonyms used in the federal rule.

40 CFR 141.24(g)(5) authorizes the State to require confirmations of positive or negative results. The Board has looked to existing 35 Ill. Adm. Code 604.203 for a rule on confirmation of positive results. As provided in Section 611.648(e), if a sample exceeds the MCL, the CWS has to take three more samples within one month. The four samples are averaged to determine compliance with the MCL. The Board is not aware of any existing State rules on negative confirmation, and has therefore not proposed to exercise this discretion, but **solicits comment.**

40 CFR 141.24(g)(6) allows the States to require surface water supplies to sample for vinyl chloride. The Board has not proposed to exercise this discretion, but **solicits comment.**

40 CFR 141.24(g)(7) authorizes the State, or a group of CWSs to composite up to five samples. If any organic contaminant is detected, the individual sources must be resampled and analyzed separately. Apparently this procedure is intended to save analytical costs. The Board has proposed an equivalent in Section 611.648(g). Note that there appears to be a major typographical error in the text of 40 CFR 141.24(g)(7) at 52 Fed. Reg. 25712: The text uses both "organic contaminant" and "VOC", but is not grammatically correct. The Board

has proposed to correct the error to yield the reading on which the above discussion is based. However, it is conceivable that the USEPA rule is intended to require only a generic VOC analysis of the composite, to be followed by GC/MS if VOC's are detected. The Board **solicits comment.**

Section 611.648(h) authorizes the Agency, by permit condition, to reduce monitoring frequency based on certain conditions. 40 CFR 141.24(g)(8)(ii)(A) provides that, if the first year of sampling is negative, repeat monitoring for these organic contaminants is "only required at State discretion". In that there are no existing State standards for these contaminants, the Board has not proposed to exercise this discretion, but **solicits comment.** (Section 611.648(h)(2)(A)).

Section 611.648(h)(3) allows the Agency, by permit condition, to to reduce the frequency of organic contaminant monitoring if levels are "consistently less than the MCL for three consecutive years."

Section 611.648(h)(4) sets a standard for "vulnerability" for a groundwater system, which is used in some of the monitoring decisions. A portion of this is the proximity to use, disposal or storage of "Volatile Synthetic Organic Chemicals". The Board has proposed to replace this with "the organic chemicals listed in Section 611.340". As noted above, "synthetic" is a poor term, since one of the listed chemicals, benzene, is a natural feed stock. Also, "volatile" is a poor descriptor, since the chemicals are not being regulated because of volatility. Indeed, the more volatile the compound, the less likely it is to contaminate groundwater, since, in the event of a spill, more will evaporate before it soaks in. However, limiting the compounds to those listed may be removing an aspect of the USEPA standard: the Agency is not able to consider unlisted compounds which might be precursers to the listed compounds. The Board **solicits comment** as to whether it should add a reference to parent compounds.

Section 611.648(j) et seq. govern laboratory certification, etc. The Board has back-referenced Section 611.490 for approval of alternative methods. The Board has edited the certification requirements on the assumption that the Agency will be delegated this responsibility. As is discussed above, the Board **solicits comment** as to whether the rules need to also reference USEPA certification. Also, "performance evaluation samples" appears to be a term of art requiring definition.

Section 611.650

This Section is derived from 40 CFR 141.40(a-f) (1987), as amended at 52 Fed. Reg. 25712, July 8, 1987, and at Fed. Reg. 25109, July 1, 1988. It requires special monitoring for 36 organic chemicals. Note that there are no MCL's directly associated with this monitoring. However, a few of the parameters are involved with MCL's: for example, chloroform is a component of the THM standard in Section 611.310.

The list of chemicals is presented in the same order as in the USEPA rule. This appears to be arbitrary. It would be much easier to find items in the list if it were alphabetized. However, this would make comparison with the USEPA rule more difficult. The Board **solicits comment** as to whether an alphabetical list would be better.

40 CFR 141.40(d) allows the State to require confirmation samples for positive or negative results. This is similar to existing 35 Ill. Adm. Code 604.203, and to Section 611.648(e) above. As noted above, there is no tradition for negative confirmation samples in the Board's existing rules. Moreover, in this situation there is no MCL: any detection is a "positive". The language of the existing 35 Ill. Adm. Code 604.203 would not apply. The Board has therefore proposed not the exercise this discretion, but **solicits comment.**

Section 611.657

This Section is derived from 40 CFR 141.40(g-m) (1987), as amended at 52 Fed. Reg. 25712, July 8, 1987, and at 53 Fed. Reg. 25109, July 1, 1988. This specifies the analytical requirements for the special monitoring in the preceding Section

40 CFR 141.40(j) authorizes the States to require monitoring for 15 additional parameters. In that there is no existing requirement for this, the Board has not proposed to exercise this discretion, but **solicits comment.**

THM MONITORING

This Subpart governs THM monitoring. This is related to foregoing organic monitoring, in that THMs are organic compounds. It is also related to the disinfection and microbial standards, in that THMs are produced when chlorine is used as a disinfectant.

As discussed above, the Board's existing THM rules are in 35 Ill. Adm. Code 605.104. These are the same as the USEPA rules. However, in R84-12 the Board is moving toward final adoption of a proposal to remove the 10,000 persons limitation on this standard, which would be a more stringent regulation. This is coupled with changes to the monitoring requirements. The Board will revise this Subpart to reflect the new requirements before final adoption.

Section 611.680

This Section is derived from 40 CFR 141.30(a) and (b) (1987). The first federal subsection consists of three unrelated rules in a single paragraph, which the Board has broken out into three subsections. The second consists of three subsections, without introductory material. The Administrative Code prohibits this format. The Board has therefore proposed headings to group the two subsections. However, it is not obvious what the subdivisions have in common. The Board **solicits comment** as to whether other headings would more aptly describe the contents. It's possible that better headings would be "Part of this Section" and "More of the same". An alternative would be to delete the (a) and (b) labels, and have six primary subdivisions. However, this would violate the general correspondence rule between this Part and 40 CFR 141. It would cause chronic problems with any cross references into this Section.

The second sentence of 40 CFR 141.30(a) authorizes the State to group multiple wells drawing water from the same aquifer for the purpose of determining the minimum number of samples. The Board has proposed to add

language making it clear that this is to be done by permit condition. Note that the "same aquifer" determination is a question of fact which requires evaluation of well construction and geology.

40 CFR 141.30 has a lot of passive voice and unnecessary words. The Board has proposed to edit these more extensively than the rest of the proposal. This allows the Board to specify "by permit action" more easily. The Board has also replaced repeated standards with cross references to avoid having to say things more than once.

Section 611.683

This Section is derived from 40 CFR 141.30(c) (1987). This allows CWS's using groundwater sources a reduced monitoring frequency for THM's, if the CWs shows current compliance with the THM standard, and that it is unlikely to exceed the standard. The CWS is then allowed to monitor on the basis of a single annual sample at the point in the system reflecting maximum residence time.

As is discussed above, Board has generally broken this Section into subsections, placed it into active voice, deleted unnecessary words and specified that these actions are to be taken by permit action.

The USEPA rule uses two terms, which could either reflect typographical errors, or be new undefined terms. The rules refer to "maximum TTHM potential" and "total TTHM". The latter is probably a typo, since "TTHM" stands for "Total THM". The Board has corrected this. The former looks more like an undefined parameter. The Board has left this alone, but **solicits comment** as to what it means, and how it relates to the MCL. The Board also **solicits comment** as to how it relates to the proposal in R84-12.

Section 611.684

This Section is derived from 40 CFR 141.30(d) (1987). It specifies a twelve month running average for THM.

This Section is related to existing 35 Ill. Adm. Code 604.203(d), which appears to say pretty much the same thing.

Section 611.685

This Section is derived from 40 CFR 141.30(e) (1987). It specifies analytical methods. Note that the methods are set forth at length in 40 CFR 141.30, Appendix C. The Board has instead referenced to the same thing in USEPA Methods, as outlined in the incorporations by reference Section.

Section 611.686

This Section is derived from 40 CFR 141.30(f) (1987). This Section prohibits unauthorized modification of a CWS to achieve compliance with THM's. Note that this arises out of the tension between the requirement to disinfect and achieve compliance with microbial standards on the one hand, and avoid THM's on the other.

This Section is to some extent surplusage in the Illinois system, in that the CWS would have to obtain a construction permit and modified operating permit to make any such changes. However, it has been retained in that it sets out relevant information which the CWS should provide in such an application.

40 CFR 141.30(f)(4), reflected in Section 611.686(d), requires "standard plate count analyses" for CWS's going to chlorine dioxide or related disinfectants. This is another undefined parameter. The Board **solicits comment** as to what this means.

RADIOLOGICAL MONITORING

This Subpart addresses radiological monitoring. As is discussed above in connection with the MCL's in Section 611.330 and 611.331, the existing Board MACs are basically the same as the USEPA MCL's. Under the general approach discussed above, the Board will propose to adopt the USEPA monitoring requirements associated with its standards. This ought to have been straightforward. However, these requirements have many provisions which are "recommended", or left to State discretion. Since the Board's existing monitoring requirements were drawn from these same rules, there is usually a precedent for deciding which way to go on these. Therefore, the following discussion winds up drawing heavily from the existing rules.

Section 611.720

This Section is derived from 40 CFR 141.25 (1987). This Section specifies analytical methods.

Section 611.731

This Section is derived from 40 CFR 141.26(a) (1987). It specifies the requirements for monitoring for gross alpha particle activity. This usually arises because of naturally occurring radium in the water. If alpha particle activity exceeds a certain level, the CWS is required to analyze for radium 226 and 228.

This Section is related to existing 35 Ill. Adm. Code 605.105 and 605.106.

This Section has a basic question as to applicability. The MCL's in 40 CFR 141.15 and 141.16 apply to all PWS's. However, the monitoring requirement uses terms which are closely akin to "CWS". It is conceivable that the MCL applies the PWS's, but the monitoring is required only of CWS's. Existing 35 Ill. Adm. Code 604.302 and 605.106 clearly apply to CWS's. The Board has substituted "CWS" into the radiological monitoring rules, but **solicits comment.**

As is discussed in general above, "system", "supply" and "CWS" can have at least four meanings: the person or entity which owns the operation; the operation itself; the pipes and equipment; and, the source of raw water. When the Board uses "CWS", it means the operation itself, together with the person or entity which owns the operation. This Section refers at several points to the "supplier of water ... for a CWS". This could be read as

referring to the owner of the CWS, or, somehow, to the owner of the source water. However, this doesn't make any sense in terms of what the rules do. The Board therefore assumes that this is just a long way to say "CWS", and has substituted this term, but **solicits comment.**

40 CFR 141.26(a)(1)(i) "recommends" that the State require "radium-226 and/or radium-228" analysis when gross alpha exceeds 2 pCi/L and radium-228 may be in the water. The Board has implemented this consistent with existing 35 Ill. Adm. Code 605.105(b). In Section 611.731(a)(1), the proposal is specific that the Agency is to "require" the monitoring by permit condition. Also, as is discussed above, the Board has replaced "and/or" with the equivalent "or".

40 CFR 141.26(a)(2) is a transitional rule which is not reflected in the proposal. Section 611.731(b) is omitted to reflect this.

Under Section 611.731(c), CWS's are required to monitor at least once every four years, apparently meaning to take the required four quarterly samples in one year out of four. This is subject to a number of provisos.

40 CFR 141.26(a)(2) provides that, at the discretion of the State, if the results of one year's analyses gives a value less than one half the MCL, the CWS may substitute a single annual sample for quarterly monitoring. Consistent with existing 35 Ill. Adm. Code 605.106, the Board has proposed to allow the Agency to reduce the monitoring frequency by permit condition.

40 CFR 141.26(a)(2)(i) through (v) talk of alternative monitoring "when ordered by the State". None of these appear to be emergency situations similar to a "boil order". Rather, they are typical embellishments on the general monitoring rule, which the Agency should address by way of permit modification. However, there are drafting problems in rephrasing each of these into permit language. The Board **solicits comment** as to whether they capture the meaning of the USEPA rule.

Section 611.732

This Section is derived from 40 CFR 141.26(b) (1987). This governs monitoring for "manmade radioactivity", which is generally associated with beta particle (electron) and photon emissions.

This Section is related to existing 35 Ill. Adm. Code 605.107 and 605.108.

40 CFR 141.26(b)(1) requires CWSs over serving 100,000 persons and such other CWS's "as are designated by the State" to monitor for manmade radioactivity. Existing 35 Ill. Adm. Code 605.107(a) has this as a case-by-case decision to be made by the Agency. The Board has proposed to follow this interpretation, specifying that the decision is to be made in the context of permit issuance. However, the Board notes that there is no reviewable standard for Agency action. An alternative would be to add a standard, such as "if the Agency determines that there is a possible source of manmade radioactivity in the watershed." Another alternative would be to make the decision at the program level: i.e. by specifying monitoring for some size less than 100,000 persons. The Board **solicits comment** as to these

alternatives.

40 CFR 141.26(b)(1)(ii) and (iii) contain "order" type provisions which, consistent with the above discussion, have been rendered into permit condition language.

40 CFR 141.26(b)(2, is a transitional rule which is not reflected in the proposal.

40 CFR 141.26(b)(4) provides that a CWS "designated by the State as utilizing waters contaminated by effluents from nuclear facilities" must "initiate" monitoring for gross beta, iodine-131, strontium-90 and tritium. In Section 611.732(d), the Board has proposed this as a case-by-case decision to be made by the Agency by permit condition, consistent with existing 35 Ill. Adm. Code 605.108(b) through (f).

REPORTING AND PUBLIC NOTIFICATION

This Subpart specifies the requirements governing reporting to the Agency, notification of the public and recordkeeping. As is discussed in general above, the Board has generally determined stringency with respect to the MCL's, and has proposed to retain the reporting requirements associated with the more stringent MCL. However, the State reporting requirements are mainly general requirements which are not associated with a particular parameter. And, they say pretty much the same thing as the federal requirements. If the Board were to follow through on the general plan, it should propose separate notification requirements for the federal and State MCL's.

For example, under the general plan, a PWS might have a malfunction which resulted in violations of both a federal and a State MCL. The PWS might have to give notices in different newspapers on different time schedules for the State and federal violations. This would certainly be much more burdensome than following either set of rules.

Having two sets of general notification requirements would produce a very complex set of rules which wouldn't be appreciably different from just making the general portion of the federal notification requirements applicable to everything. The Board has therefore proposed to follow the latter course.

The State MAC's have only general notification requirements associated with them. On the other hand, the federal MCL's have detailed health effects notices prescribed by rule. Under the foregoing approach, a violation of a State MCL will be governed by general language, while the federal MCL will have detailed requirements.

This Subpart has an applicability problem associated with the one in the previous Subpart. Most of the requirements are made applicable to "the owner or operator of the PWS". As is discussed in general above, the terms PWS, CWS, etc., as defined, include the "owner or operator". The Board has therefore generally deleted this as superfluous.

Section 611.830

This introductory Section provides that the general notification requirements apply to both the federal and State MCL's.

Section 611.831

This Section is drawn from existing 35 Ill. Adm. Code 606.101. It requires a monthly operating report. This appears to be separate from the federal notification requirements, which are triggered by violations of MCL's and other requirments.

Section 611.832

This Section is drawn from 40 CFR 141.32(g) and 141.34(a)(1), as well as existing 35 Ill. Adm. Code 606.205. It authorizes the Agency to give public notices for the PWS. However, it is still the PWS's responsibility to get the notice done.

Section 611.833

This Section is drawn from existing 35 Ill. Adm. Code 606.102(d), and from Section 17(b)(5) of the Act. It requires a PWS which is exempt from disinfection to report monthly on its efforts to educate customers on preventing contamination of the distribution system. As is discussed in general above, the existing rules were superseded by Section 17(b) of the Act. However, 35 Ill. Adm. Code 606.102(b) appears to be consistent with Section 17(b)(5). The Board has therefore proposed to retain it, but **solicits comment.**

Section 611.840

This Section is derived from 40 CFR 141.31 (1987), as amended at 54 Fed. Reg. 27562, June 29, 1989. This is the general reporting requirement.

This Section is related to existing 35 Ill. Adm. Code 606.101 and 606.102(a) through (d) and 606.204(a) and (b).

40 CFR 141.31(a) requires the PWS to report to the State within by the tenth of the month following the analysis, or within ten days after the end "of the required monitoring period as stipulated by the State", whichever is shorter. The Board has implemented this by reference to the monitoring period required by permit condition. The alternative would be to specify an alternative time period.

40 CFR 141.31(b) requires reporting to the Agency within 48 hours after any failure to comply with an NPDWR. Because these reporting requirements will apply equally to additional State requirements, the Board has substitute "this Part".

40 CFR 141.31(c) provides that the PWS is not required to report analytical results where the State performs the analysis and reports the results to the office which would receive the report from the PWS. This is similar to existing 35 Ill. Adm. Code 605.102(b). Because in Illinois the same agency, IEPA, performs analyses and receives reports, the Board has proposed to drop the contingency from the rule, but **solicits comment.** This

would mean that there would be no PWS reporting of Agency analytical results.

Existing 35 Ill. Adm. Code 607.103 specifies the details of "boil orders" when microbial standards are exceeded. The Board has omitted this, consistent with the general discussion above, because the Board has proposed to adopt the USEPA microbial standards. The USEPA notification rules require a similar type notice. However, the Board **solicits comment** as to whether portions of Section 607.103 need to be retained.

Section 611.851

This Section is derived from 40 CFR 141.32(a) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987, at 54 Fed. Reg. 15188, April 17, 1989, at 54 Fed. Reg. 27526, June 29, 1989, and at 54 Fed. Reg. 27562, June 29, 1989.

This Section is related to existing 35 Ill. Adm. Code 606.201, 606.202 and 606.203.

40 CFR 141.32(a)(1)(iii)(A) requires prompt radio and tv notice for MCL violations which pose an acute hazard to human health, as "specified by the State". This raises a question as to whether this should be specified by regulation or on a case-by-case basis. Some of the MCL's are above specified as posing an acute hazard. However, the Board does not have a basis on which to specify others in this identical in substance rulemaking. The Board has therefore provided, in Section 611.851(a)(3)(A), that prompt notice is to be given for any violations specified in this Part, or as specified by the Agency on a case-by-case basis, but **solicits comment.** Note that the following subsections list nitrate and total coliform violations as being acute.

Section 611.852

This Section is derived from 40 CFR 141.32(b) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987.

40 CFR 141.32(b) requires notice, among other things, if the PWS is subject to "a variance granted under Section 1415(a)(1)(A) or 1415(a)(2) of the (SDWA), or is subject to an exemption under Section 1416 of the (SDWA)" The Board has referenced the variance and adjusted standards provisions discussed above at Section 611.111 et seq. Note, however, that the USEPA language is using different terminology here. The Board assumes that this is intended to refer to the "variance" under Section 1415(a)(1)(A), the "variance" under Section 1416 and the "exemption" under Section 1415(a)(3), but **solicits comment.**

40 CFR 141.32(b)(4) allows States the discretion to require less frequent notice for "minor monitoring violations, as defined by the State". The Board has proposed to allow the Agency to specify reduced frequency by permit condition, but **solicits comment.**

Section 611.853

This Section is derived from 40 CFR 141.32(c), as amended at 52 Fed. Reg. 51546, October 28, 1987. It requires copies on notices to go to new billing units.

Section 611.854

This Section is derived from 40 CFR 141.32(d) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987. This specifies the general content of the public notice. Most of the federal MCL's now have specific information set out below in Appendix A. This Section will mainly apply to the additional State requirements. It is comparable to existing 35 Ill. Adm. Code 606.204.

Section 611.855

This Section is derived from 40 CFR 141.32(e) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987, and at 54 Fed. Reg. 27526, June 29, 1989, and at 54 Fed. Reg. 27562, June 29, 1988. The text of the mandatory notices have been moved to Appendix A.

Section 611.856

This Section is derived from 40 CFR 141.32(f) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987. The contents of the public notice for fluoride are specified in 40 CFR 143.5. Rather than reference this Part, the Board has set forth the text of the notice in Appendix A below.

40 CFR 141.32(g) has been addressed as a global rule in Section 611.832 above.

Section 611.860

This Section is derived from 40 CFR 141.33 (1987).

This Section is related to existing 35 Ill. Adm. Code 607.106.

Section 611.861

This Section is derived from 40 CFR 141.34(a) and (b) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987. This is the mandatory public notice of possible lead contamination. It must be given whether there is a violation of the MCL or not. Note that the USEPA rule refers to "any violation of the (NPDWR) for lead." The Board construes this as referring to the MCL.

The USEPA rule required notice by June 19, 1988, which obviously cannot now be met. The Board has proposed to require CWS's, and NTNCWS's, to give notice by June 19, 1990, which will be about six months after these rules are adopted, but **solicits comment.** The Board has also provided that notice given pursuant to 40 CFR 141.34 is sufficient, to avoid requiring any CWS's which met the federal date to repeat the notice.

40 CFR 141.34(a)(1) allows the states to require subsequent notices. The Board has not proposed to exercise this discretion.

Section 611.863

This Section is derived from 40 CFR 141.34(c) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987. This Section includes the general content

of the lead notice.

Section 611.864

This Section is derived from 40 CFR 141.34(d) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987 The text of the mandatory notice has been moved to Appendix A.

40 CFR 141.34(e) has been made a global rule in Section 611.832 above. 40 CFR 141.34(f) contains a directive for program approval, rather than a pattern rule. No equivalent has been proposed.

Section 611.870

This Section is derived from 40 CFR 141.35 (1987), as amended at 52 Fed. Reg. 25712, July 8, 1987. This is a notice concerning the additional organic contaminants which are monitored under Section 611.650, but for which there is no MCL.

40 CFR 141.35(c) is not a pattern rule. Rather, it is a regulation which applies to the states pending adoption of equivalent regulations. No equivalent has been proposed.

Section 611.Appendix A

This Section is derived from 40 CFR 141.32(e) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987, and at 54 Fed. Reg. 27526, June 29, 1989, and at 54 Fed. Reg. 27562, June 29, 1988; and from 40 CFR 141.34(d) (1987), as amended at 52 Fed. Reg. 41546, October 28, 1987; and from 40 CFR 143.5 (1987). This is the text of the mandatory health effects information which must be published.

Section 611.Appendix B

This Section is derived from 40 CFR 141.74(b) (1987), as amended at 54 Fed. Reg. 27526, June 29, 1989. This contains the tables for CT values for 99.9 percent inactivation of G. lamblia cysts by various disinfectants at various values of RDC, pH and temperature.

There are a number of apparent typographical errors in the federal tables at 54 Fed. Reg. 27532. All of the tables refer to "Free Residual" except Table 1.1, which is "Residual". In that Table, while the first entry under "Residual", and the headings for pH 6.0 and 9.0 are "less than", in all other tables the values are "less than or equal". In all of the tables, what value do you use if the pH is greater than 9.0?

Section 611.Appendix C

This Section is derived from 40 CFR 141.30 (1987). This is a list of common names of organic chemicals, which have been moved here to prevent clutter in the MCL tables.

40 CFR 141.30 includes both a common name and a long name for the pesticides. Existing 35 Ill. Adm. Code regulates additional parameters which

have also been moved into Section 611.310. However, the existing Board rule has only the common name. The Board has provided a Chemical Abstracts Services (CAS) Registry Number and the Chemical Abstracts name for each regulated parameter, whether from the CFR or existing Board rule. Note that in most cases the long name in the CFR is different from the CAS name. The Board has generally substituted the preferred CAS name. The CAS names and numbers are drawn from the hazardous waste rules at 40 CFR 262, Appendix VIII, or 35 Ill. Adm. Code 721.Appendix H.

CROSS REFERENCE TABLE FOR R88-26

The following table shows the source of each Section the USEPA regulations, and shows a comparable provision in the existing Board regulations. Note that zeros have been inserted into federal Section numbers so the computer will sort them into the same order as they appear in the CFR. Also, ".999" has been inserted into some Sections to make them appear at the end of lists.

Proposal: 35 Ill. Adm. Code:	Source: 40 CFR:	Compare with existing: 35 Ill. Adm. Code:
611.100	141.001	*
611.101	141.002	*
611.102	*	*
611.108	*	Act, 4(r)
611.109	141.023(e)(4)	*
611.109	141.022(e)	*
611.110	141.003	*
611.111	141.004	*
611.112	141.004	*
611.113	SDWA, 1415(a)(3)	*
611.114	141.005	*
611.120	141.060	*
611.120	141.006	*
611.124	*	607.104
611.125	*	604.405
611.126	141.043	*
611.128(a)	141.071	*
611.128(b)	141.002	*
611.128(c)	141.072(a)(4)(ii)	*
611.129	141.070	*
611.130	141.071	*
611.131	141.071(a)	604.502(a,b,c)
611.131	141.071(a)	604.501(a,b,c)
611.132	141.071(b)	604.501(d)
611.133	141.071(c)	604.203(e)(1)
611.140	141.072	605.101
611.140	141.072	604.402(b)
611.140	141.072	604.403
611.140	141.072	604.404
611.140	141.072	604.501(e)
611.140	141.072	604.401(a,b,d)
611.141	141.072(a)	*
611.142	141.072(b)	*
611.150	141.073	*
611.161	141.075(a)	*
611.162	141.075(b)	*
611.171	*	607.101
611.172	*	607.102
611.180	141.100	*
611.190	141.101	*
611.300	141.011	604.203(a,b)

611.300	141.011	604.202
611.310	141.012	604.202
611.310	141.012	604.203(d)(2)
611.320	141.013	604.203(e)(1)
611.320	141.013	604.202
611.330	141.015	604.301
611.331	141.016	604.302
611.340	141.061	*
611.350	141.062	*
611.360	141.063	604.102
611.360	141.063	604.105
611.380	141.050	*
611.390	141.051	*
611.400	141.052	*
611.480	141.027	605.110
611.490	141.028	607.105
611.490	141.028	605.101(c)
611.491	*	607.105(a) and (c)
611.492	*	604.204
611.493	*	605.103
611.500	141.029	605.109(a)
611.500	141.029	604.402(a)
611.500	141.029	604.204
611.521	141.021(a)	605.102
611.521	141.021(a)	605.101(a)
611.521	141.021(a)	604.103
611.521	141.021(a)	604.104
611.522	141.021(b)	*
611.523	141.021(c)	*
611.524	141.021(d)	*
611.525	141.021(e)	*
611.526	141.021(f)	604.101
611.527	141.021(g)	*
611.531	141.074(a)	*
611.532	141.074(b)	*
611.533	141.074(c)	*
611.560(a)	141.022(a)	605.109(b)
611.560(b)	141.022(b)	605.109(a)
611.560(b)	141.022(b)	604.203(e)(2)
611.601	141.023(a-e)	605.103
611.601(d)	141.023(d)	604.203(c)
611.606	141.023(f)	*
611.607	141.023(g)	*
611.610	141.041	*
611.621	141.042(a,b)	*
611.623	141.042(c)	*
611.624	141.042(d)	*
611.641	141.024(a-d)	605.103
611.645	141.024(e,f)	*
611.648	141.024(g)	*
611.650	141.040(a-f)	*
611.657	141.040(g-m)	*
611.680	141.030(a,b)	605.104
611.680	141.030(a,b)	605.103

611.683	141.030(c)	*
611.684	141.030(d)	604.203(d)(1,2,3)
611.685	141.030(e)	*
611.686	141.030(f)	*
611.720	141.025	604.303
611.731	141.026(a)	605.105
611.731	141.026(a)	605.106(a,b,c,d,e)
611.732	141.026(b)	605.108(e)
611.732	141.026(b)	605.107
611.732	141.026(b)	605.108
611.830	*	*
611.831	*	606.101
611.832	141.032(g)	606.205
611.832	141.032(34(a)(1)	606.205
611.833	*	606.102(d)
611.840	141.031	606.101
611.840	141.031	606.102(a,b,c)
611.840	141.031	604.204(a,b)
611.851	141.032(a)	606.202
611.851(a)	141.032(a)(1)	606.203
611.851(b)	141.032(a)(2)	606.201
611.852	141.032(b)	*
611.853	141.032(c)	*
611.854	141.032(d)	*
611.855	141.032(e)	*
611.856	141.032(f,g)	606.205
611.860	141.033	607.106
611.861	141.034(a,b)	*
611.863	141.034(c)	*
611.864	141.034(d-f)	606.205
611.870	141.035	*
611.999,AppA	141.032(e)	*
611.999,AppA	143.005	*
611.999,AppA	141.034(d)	*
611.999,AppB	141.074(b)	*
611.999,AppC	141.030	*

DESTINATION OF FEDERAL SECTIONS

The following table shows where each USEPA Section is located in the proposal.

Proposal: 35 Ill. Adm. Code:	Source: 40 CFR:
611.100	141.001
611.128(b)	141.002
611.101	141.002
611.110	141.003
611.111	141.004
611.112	141.004
611.114	141.005
611.120	141.006
611.300	141.011

611.310
611.320
611.330
611.331
611.521
611.522
611.523
611.524
611.525
611.526
611.527
611.560(a)
611.560(b)
611.109
611.601
611.601(d)
611.109
611.606
611.607
611.641
611.645
611.648
611.720
611.731
611.732
611.480
611.490
611.500
611.500
611.999,AppC
611.680
611.683
611.684
611.685
611.686
611.840
611.832
611.851
611.851(a)
611.851(b)
611.852
611.853
611.854
611.855
611.999,AppA
611.856
611.832
611.860
611.861
611.863
611.999,AppA
611.864
611.870
611.650

141.012
141.013
141.015
141.016
141.021(a)
141.021(b)
141.021(c)
141.021(d)
141.021(e)
141.021(f)
141.021(g)
141.022(a)
141.022(b)
141.022(e)
141.023(a-e)
141.023(d)
141.023(e)(4)
141.023(f)
141.023(g)
141.024(a-d)
141.024(e,f)
141.024(g)
141.025
141.026(a)
141.026(b)
141.027
141.028
141.029
141.029
141.030
141.030(a,b)
141.030(c)
141.030(d)
141.030(e)
141.030(f)
141.031
141.032(34(a)(1)
141.032(a)
141.032(a)(1)
141.032(a)(2)
141.032(b)
141.032(c)
141.032(d)
141.032(e)
141.032(e)
141.032(f,g)
141.032(g)
141.033
141.034(a,b)
141.034(c)
141.034(d)
141.034(d-f)
141.035
141.040(a-f)

611.657	141.040(g-m)
611.610	141.041
611.621	141.042(a,b)
611.623	141.042(c)
611.624	141.042(d)
611.126	141.043
611.380	141.050
611.390	141.051
611.400	141.052
611.120	141.060
611.340	141.061
611.350	141.062
611.360	141.063
611.129	141.070
611.130	141.071
611.128(a)	141.071
611.131	141.071(a)
611.132	141.071(b)
611.133	141.071(c)
611.140	141.072
611.141	141.072(a)
611.128(c)	141.072(a)(4)(ii)
611.142	141.072(b)
611.150	141.073
611.531	141.074(a)
611.999,AppB	141.074(b)
611.532	141.074(b)
611.533	141.074(c)
611.161	141.075(a)
611.162	141.075(b)
611.180	141.100
611.190	141.101
611.999,AppA	143.005
611.113	SDWA, 1415(a)(3)

COMPARISON WITH EXISTING RULES

The following table shows where a rule comparable to existing Board rules is to be found in the proposal. This table attempts to list to closest approximation to each existing rule, since many existing rules are less stringent or inconsistent with federal rules, and do not appear in the proposal.

Proposal: 35 Ill. Adm. Code:	Compare with: 35 Ill. Adm. Code:
611.526	604.101
611.360	604.102
611.521	604.103
611.521	604.104
611.360	604.105
611.320	604.202
611.300	604.202

611.310	604.202
611.300	604.203(a,b)
611.601(d)	604.203(c)
611.684	604.203(d)(1,2,3)
611.310	604.203(d)(2)
611.320	604.203(e)(1)
611.133	604.203(e)(1)
611.560(b)	604.203(e)(2)
611.500	604.204
611.492	604.204
611.840	604.204(a,b)
611.330	604.301
611.331	604.302
611.720	604.303
611.140	604.401(a,b,d)
611.500	604.402(a)
611.140	604.402(b)
611.140	604.403
611.140	604.404
611.125	604.405
611.131	604.501(a,b,c)
611.132	604.501(d)
611.140	604.501(e)
611.131	604.502(a,b,c)
611.140	605.101
611.521	605.101(a)
611.490	605.101(c)
611.521	605.102
611.641	605.103
611.680	605.103
611.601	605.103
611.493	605.103
611.680	605.104
611.731	605.105
611.731	605.106(a,b,c,d,e)
611.732	605.107
611.732	605.108
611.500	605.109(a)
611.560(b)	605.109(a)
611.560(a)	605.109(b)
611.480	605.110
611.831	606.101
611.840	606.101
611.840	606.102(a,b,c)
611.833	606.102(d)
611.851(b)	606.201
611.851	606.202
611.851(a)	606.203
611.864	606.205
611.832	606.205
611.856	606.205
611.171	607.101
611.172	607.102
611.124	607.104

611.490	607.105
611.491	607.105(a) and (c)
611.860	607.106
611.108	Act, 4(r)

This Proposed Opinion supports the Board's Proposed Order of this same day. The text of the Proposal will be published in the Illinois Register. The Board will receive public comment for 45 days after the days of publication in the Illinois register.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Opinion was adopted on the 5th day of October, 1989, by a vote of 6-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board