ILLINOIS POLLUTION CONTROL BOARD
December 6, 1991

IN THE MATTER OF:	)	
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GROUNDWATER PROTECTION: REGULATIONS FOR EXISTING AND NEW ACTIVITIES WITHIN SET-BACK ZONES AND REGULATED RECHARGE AREAS (35 ILL. ADM. CODE 601, 615, 616 and 617) ("TECHNICAL STANDARDS")	)	R89-5 (Rulemaking)

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

This matter comes before the Board upon a regulatory proposal filed by the Illinois Environmental Protection Agency ("Agency") pursuant to Sections 14.4(b) and 14.4(d) of the Illinois Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111½, par. 1001 et seq.) ("Act"). Section 14.4 was enacted by the Illinois General Assembly as part of the Illinois Groundwater Protection Act ("IGPA"), P.A. 85-863[1], effective September 24, 1987.

Sections 14.4(b) and 14.4(d) mandate inter alia that the Agency propose and the Board promulgate regulations prescribing standards and requirements for certain activities within setback zones and regulated recharge areas, as these terms are defined in the IGPA. The set of affected activities includes, in general, those activities that offer significant potential for producing groundwater contamination, and which are not otherwise currently subject to regulations which limit or eliminate their potential for producing groundwater contamination.

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[1] P.A. 85-863 consists of sixteen sections, the first nine of which constitute a free-standing body of statute found at Ill. Rev. Stat. 1989, ch. 111½, par. 7451 et seq.. Of the remaining sections, all but the last (effective date provision) provide amendments to various pre-existing statutes. Amendments to the Environmental Protection Act occur in Section 14 of P.A. 85-863. The term "Groundwater Protection Act" is commonly used to refer to both the free-standing first nine sections, and to the full sixteen sections of P.A. 85-863. Unless otherwise specified, the latter senso lato usage is employed herein.

The Board wishes to acknowledge the special contribution made by Michelle C. Dresdow, who has served as Hearing Officer in this proceeding.

This matter previously has been submitted for First and Second Notice by the Board. By today's action the Board adopts the rules. Today's Opinion contains eight major sections, in order as follows:

Procedural History
Statutory Framework
Overview of Regulations
Discussion of Part 601
Discussion of Part 615
Discussion of Part 616
Discussion of Part 617
Economic Impact

PROCEDURAL HISTORY

The Agency filed its proposal in the instant matter, accompanied by a Statement of Reasons, on March 13, 1989.

On April 1, 1989 the Illinois Department of Energy and Natural Resources ("DENR") filed a Public Comment ("PC") pursuant to Section 27(a) of the Act requesting that the Board determine that an Economic Impact Study ("EcIS") be prepared. By Order of April 27, 1989 the Board issued its finding that an EcIS should be prepared.

Merit hearings were held on May 16 and 17, 1989 in Springfield, Illinois, and on June 1 and 2, 1989 in Chicago, Illinois. The Springfield hearings were devoted to the Agency's presentation of the proposal and to the public's and Board's questioning of the Agency regarding the rationale and operations of the proposal. Questioning of the Agency continued at the Chicago hearings. Additionally, testimony on behalf of the McHenry County Defenders, Citizens for a Better Environment, the Great Lakes Chapter of the Sierra Club, and the Illinois Steel Group was received at the Chicago hearings.

By Hearing Officer Order of June 15, 1989 a post-hearing comment period was set through August 1, 1989. Six Public Comments (PC #5 through #10) were received during this period.

On August 31, 1989 the Board adopted a version of the proposal for First Notice[2] ("1st First Notice"). As the Board noted in the 1st First Notice Opinion (p. 1-2), a principal reason for taking First Notice action at that time was to provide a draft upon which the EcIS could be focused. A second reason was to allow two other regulatory actions to proceed to the point where their potential interplay with the instant proceeding would

[2] Publication occurred at 13 Ill. Reg. 14641, September 22, 1989.

be more apparent. These two actions were the Board's proposed revision of its landfill regulations undertaken in Docket R88-7[3] and the companion "groundwater standards" proceeding mandated under Section 8(a) of the IGPA (see following discussion of Docket R89-14).

The landfill regulations considered in R88-7 were adopted August 17, 1990 and became effective September 18, 1990. However, while the Board awaited the EcIS and the outcome of the R89-14 proceeding, the one-year active term[4] of the 1st First Notice expired. In addition, the deadline set at Section 14.4 of the Act for completion of the instant rulemaking passed. The Board addressed both these concerns by Order of February 28, 1991, where it reiterated its intent to await completion of the EcIS and further resolution in R89-14, but otherwise to expedite this proceeding.

The EcIS was duly completed under the direction of the Illinois Department of Energy and Natural Resources ("DENR"); the statutory EcIS hearing was held in Springfield on April 3, 1991[5]. Also, the final hearing in R89-14 was conducted on May 30, 1991.

Accordingly, the Board re-noticed the instant regulations ("2nd First Notice") on June 20, 1991[6]. The principal changes between the 1st and 2nd First Notice proposal accommodated the latter to actions taken in the landfill and groundwater standards proceedings, R88-7 and R89-14.

On September 12, 1991 the Board adopted the proposal for Second Notice. On November 19, 1991, the Joint Committee on Administrative Rules voted to object to the proposal. The Board addresses the JCAR objection by separate Resolution adopted today. JCAR staff also made non-substantive recommendations, mainly on grammatical and typographical errors. The Board has

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[3] In the Matter of: Development, Operating, and Reporting Requirements for Non-hazardous Waste Landfills.

[4] The Illinois Administrative Procedure Act prescribes that a regulatory proposal must be acted upon within one-year of its being first noticed, otherwise it is necessary to re-first notice the proposal.

[5] Citation herein to the transcript pages of the EcIS hearing are in the form: "R2. at ___". Citation to the transcript pages of the early merit hearings (May 16, May 17, and June 1, 1989) are in the form: "R. at ___".

[6] Publication of Parts 601, 616, and 617 occurred at 15 Ill. Reg. 9829 et seq., July 5, 1991; publication of Part 615 occurred at 15 Ill. Reg. 10303, July 12, 1991.

accepted these recommendations and incorporated the changes into the rule in today's Order.

In addition to the record of testimony and exhibits developed at hearing and the EcIS document, 34 public comments ("PC") have been filed in this docket. PC #1 through #10 were filed prior to 1st First Notice; PC #5 through #25 were filed subsequent to 1st First Notice; and PC #26 through #34 were filed during the 2nd First Notice comment period. Persons filing public comments are as follows:

Public Comment #s	Filer
1, 2, 19	DENR
3, 8, 16, 21, 33	Waste Management of Illinois, Inc ("Waste Management")
4	James T. Harrington
5, 17, 25	Illinois Environmental Regulatory Group ("IERG")
6, 7, 15, 20, 30	Illinois Fertilizer and Chemical Association ("IFCA")
9, 23, 32	Agency;
10, 18, 24, 34	McHenry County Defenders, Citizens for a Better Environment, and the Illinois Chapter of the Sierra Club (collectively as "Defenders")
11, 26, 27	Administrative Code Division of the Illinois Office of the Secretary of State
12	Illinois Department of Commerce and Community Affairs
13, 22	Illinois Department of Agriculture ("IDOA")
14, 29	Metropolitan Water Reclamation District of Greater Chicago
28	Growmark, Inc.
31	Illinois Farm Bureau ("Farm Bureau").

STATUTORY FRAMEWORK

The IGPA was enacted by the Illinois General Assembly as an outgrowth of long-standing concern by the General Assembly and the citizens of the State that the State's rich and valued groundwater resources be protected. The IGPA is a multi-faceted policy and program statement designed to provide that protection and to assure the continued viability of the State's groundwater resources. The policy statement, as found at Ill. Rev. Stat. 1989, ch. 111½, ¶7452(b), reads:

> ... it is the policy of the State of Illinois to restore, protect, and enhance the groundwaters of the State, as a natural and public resource. The State

recognizes the essential and pervasive role of groundwater in the social and economic well-being of the people of Illinois, and its vital importance to the general health, safety, and welfare. It is further recognized as consistent with this policy that the groundwater resources of the State be utilized for beneficial and legitimate purposes; that waste and degradation of the resources be prevented; and that the underground water resources be managed to allow for maximum benefit of the people of the State of Illinois.

Section 14.4

The particular program statement that underlies today's action occurs within Section 14.4 of the Act. Section 14.4 prescribes in its entirety:

a. No later than January 1, 1989, the Agency, after consultation with the Interagency Coordinating Committee on Groundwater and the Groundwater Advisory Council, shall propose regulations to the Board prescribing standards and requirements for the following activities:

1. landfilling, land treating, surface impounding or piling of special waste and other wastes which could cause contamination of groundwater and which are generated on the site, other than hazardous, livestock and landscape waste, and construction and demolition debris;

2. storage of special waste in an underground storage tank for which federal regulatory requirements for the protection of groundwater are not applicable;

3. storage and related handling of pesticides and fertilizers at a facility for the purpose of commercial application;

4. storage and related handling of road oils and de-icing agents at a central location; and

5. storage and related handling of pesticides and fertilizers at a central location for the purpose of distribution to retail sales outlets.

In preparing such regulation, the Agency shall provide as it deems necessary for more stringent provisions for those activities enumerated in this subsection which are not already in existence.

Any activity for which such standards and requirements are proposed may be referred to as a new activity.

b. Within 2 years after the date upon which the Agency files the proposed regulations pursuant to subsection (a) of this Section, the Board shall promulgate appropriate regulations for existing activities. In promulgating these regulations, the Board shall, in addition to the factors set forth in Title VII of this Act, consider the following:

1. appropriate programs for water quality monitoring;

2. reporting, recordkeeping and remedial response measures;

3. appropriate technology-based measures for pollution control; and

4. requirements for closure or discontinuance of operations.

Such regulations as are promulgated pursuant to this subsection shall be for the express purpose of protecting groundwaters. The applicability of such regulations shall be limited to any existing activity which is located:

A. within a setback zone regulated by this Act, other than an activity located on the same site as a non-community water system well and for which the owner is the same for both the activity and the well; or

B. within a regulated recharge area as delineated by Board regulation, provided that:

i. the boundary of the lateral area of influence of a community water supply well located within the recharge area includes such activity therein;

ii. the distance from the wellhead of the community water supply to the activity does not exceed 2500 feet; and

iii. the community water supply well was in existence prior to January 1, 1988.

In addition, the Board shall ensure that the promulgated regulations are consistent with and not pre-emptive of the certification system provided by Section 14.5.

c. Concurrently with the action mandated by subsection (a), the Agency shall evaluate, with respect to the protection of groundwater, the adequacy of existing federal and State regulations regarding the disposal of hazardous waste and the offsite disposal of special and municipal wastes. The Agency shall then propose, as it deems necessary, additional regulations for such new disposal activities as may be necessary to achieve a level of groundwater protection that is consistent with the regulations proposed under subsection (a) of this Section.

d. Following receipt of proposed regulations submitted by the Agency pursuant to subsection (a) of this Section, the Board shall promulgate appropriate regulations for new activities. In promulgating these regulations, the Board shall, in addition to the factors set forth in Title VII of this Act, consider the following:

1. appropriate programs for water quality monitoring, including, where appropriate, notification limitations to trigger preventive response activities;

2. design practices and technology-based measures appropriate for minimizing the potential for groundwater contamination;

3. reporting, recordkeeping and remedial response measures; and

4. requirements for closure or discontinuance of operations.

Such regulations as are promulgated pursuant to this subsection shall be for the express purpose of protecting groundwaters. The applicability of such regulations shall be limited to any new activity which is to be located within a setback zone regulated by this Act, or which is to be located within a regulated recharge area as delineated by Board regulation. In addition, the

Board shall ensure that the promulgated regulations are consistent with and not pre-emptive of the certification system provided by Section 14.5.

e. Nothing in this Section shall be construed as prohibiting any person for whom regulations are promulgated by the Board pursuant to subsection (b) or (c) of this Section, from proposing and obtaining, concurrently with the regulations proposed by the Agency pursuant to subsection (a) of this Section, a rule specific to individual persons or sites pursuant to Title VII of this Act which codifies alternative groundwater protection methods that provide substantially equivalent protection for community water supplies.

f. Nothing in this Section shall be construed as limiting the power of any county or municipality to adopt ordinances, which are consistent with but not more stringent than the regulations adopted by the Board pursuant to this Section, for application of standards and requirements within such setback zones as are provided by this Act.

g. The Agency shall prepare a groundwater protection regulatory agenda for submittal to the Interagency Coordinating Committee on Groundwater and the Groundwater Advisory Council. In preparing this agenda, the Agency shall consider situations where gaps may exist in federal or State regulatory protection for groundwater, or where further refinements could be necessary to achieve adequate protection of groundwater.

h. Nothing in this Section shall be construed as limiting the general authority of the Board to promulgate regulations pursuant to Title VII of this Act.

Although the instant rules are promulgated pursuant to the mandate of Section 14.4, Section 14.4 sufficiently interweaves with other portions of the IGPA that it is necessary to discuss briefly these related portions.

Sources and Routes

In general usage, a "source" of groundwater contamination is any activity, facility, etc. from which a contaminant finds its way into groundwater. However, the IGPA does not define the term "source" in isolation, but instead defines "potential sources" of various types. Moreover, the definitions include only very specific activities and activity levels, such that the definition

of "potential source" as used in the IGPA and herein is substantially more circumscribed than it is in general usage.

The IGPA identifies two basic types of potential sources, potential primary source at Section 3.59 of the Act and potential secondary source at Section 3.60 of the Act. In each case a potential source is initially identified as "any unit at a facility or site not currently subject to a removal or remedial action"[7]. Additionally, a potential primary source is a potential source that:

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

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

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

4. stores or accumulates at any time more than 75,000 pounds above ground, or more than 7,500 pounds below ground, of any hazardous substances.

(Act, Section 3.59)

Conversely, a potential secondary source is any unit at a facility or site not subject to a removal or remedial action, which is not a potential primary source, and which:

1. is utilized for the landfilling, land treating, or surface impounding of waste that is generated on the site or at other sites owned, controlled or operated by the same person, other than livestock and landscape waste, and construction and demolition debris; or

2. stores or accumulates at any time more than 25,000 but not more than 75,000 pounds above ground, or more than 2,500 but not more than 7,500 pounds below ground, of any hazardous substances; or

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[7] The terms "site" and "unit" as used in the statutory definitions of potential primary source and potential secondary source are themselves statutorily defined at Sections 3.43 and 3.62 of the Act.

3. stores or accumulates at any time more than 25,000 gallons above ground, or more than 500 gallons below ground, of petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance; or

4. stores or accumulates pesticides, fertilizers, or road oils for purposes of commercial application or for distribution to retail sales outlets; or

5. stores or accumulates at any time more than 50,000 pounds of any de-icing agent; or

6. is utilized for handling livestock waste or for treating domestic wastewaters other than private sewage disposal systems as defined in the "Private Sewage Disposal Licensing Act".

(Act, Section 3.60)

In general usage, a "route" of groundwater contamination is any conduit through which a contaminant is transferred from its source to groundwater. As is the case with "potential source", the definition of "potential route" is statutorily circumscribed in the IGPA to include only specific types of routes, as follows:

> "Potential Route" means abandoned and improperly plugged wells of all kinds, drainage wells, all injection wells, including closed loop heat pump wells, and any excavation for the discovery, development or production of stone, sand or gravel. (Act, Section 3.58)

Setback Zones

Setback zone is defined at Section 3.61 of the Act as:

> "Setback Zone" means a geographic area, designated pursuant to this Act, containing a potable water supply well or a potential source or potential route, having a continuous boundary, and within which certain prohibitions or regulations are applicable in order to protect groundwaters[8].

The nature of and various restrictions applied to setback zones are expanded upon in Sections 14.1, 14.2, and 14.3 of the Act. Section 14.1 establishes a general prohibition against the

[8] The term "potable" used in this definition is itself statutorily defined at Section 3.65 of the Act.

siting of any new community water supply well[9] within 200 feet of any potential primary or potential secondary source or any potential route. This prohibition is extended pursuant to subsection (b) to 400 feet for a new community water supply well "deriving water from fractured or highly permeable bedrock or from an unconsolidated and unconfined sand and gravel formation". Section 14.1 thus, among other matters, establishes a minimum setback zone of 200 or 400 feet around potential groundwater contamination sources, within which the siting of new community wells is prohibited[10].

Minimum setback zones for potable water supply wells and prohibitions against new sitings within them are established in Section 14.2. Like the setback zones established for potential sources and potential routes in Section 14.1, the basic minimum setback zones for potable water supply wells are 200 and 400 feet, depending on the nature of the bedrock or sand and gravel formation from which the water is derived. The prohibitions against new sitings apply to new potential routes and new potential primary or secondary sources. In these elements, Section 14.2 is then essentially the converse of Section 14.1, the former establishing setbacks around the water wells, and the latter establishing setbacks around potential contamination sources/routes.

Section 14.2, however, is substantially more expansive than Section 14.1 with regard to the number of wells covered and to special conditions and exceptions. As regards coverage, the 200-foot setback under Section 14.2 initially applies to <u>all</u> potable water supply wells, not just community water supply wells; the 400-foot provision remains applicable only to community water supply wells. Because community water supply wells are only a small subset of all potable water supply wells, the number of

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[9] Community and non-community water supply systems are the two varieties of public water supply systems, pursuant to Section 3.28 of the Act. A community water supply by definition at Section 3.05 of the Act "serves or is intended to serve at least 15 service connections used by residents or regularly serves at least 25 residents"; a non-community water supply system is a public system which is not a community system. Pursuant to Section 3.05 non-community water supplies are not subject to the provisions of the Act.

[10] Section 13 of the IGPA establishes a similar prohibition against the siting of new non-community, semi-private, or private water wells within 200 feet of any potential primary or potential secondary source or any potential route. Certain exceptions may apply for private wells where the owner of the new well is the same as the owner of the potential source or route. Section 13 of the IGPA is codified at Rev. Stat. 1989, ch. 111½, par. 116.116a ("Illinois Water Well Construction Code").

wells governed by the provisions of Section 14.2 is substantially larger than those addressed by Section 14.1.

Among the special conditions and exceptions provided for in Section 14.2 is provision at subsection (b) for the owner of a potable water supply well other than a community well to waive the prohibition against siting of new potential sources/routes. A special provision at 14.4(b) also establishes that in the circumstance where a potable water supply is part of a private water system and the owner of such well will also be the owner of a new potential secondary source or new potential route, the prohibition against siting a new potential secondary source or new potential route extends to only 75 feet. Subsection (c) further allows the Board to grant exception to the prohibition against new sitings for certain types of sitings.

Whereas Section 14.2 establishes minimum setback zones around water supply wells, Section 14.3 establishes provisions by which setback zones may be expanded to a maximum zone not to exceed 1000 feet. The provision is applicable only to community water supply wells and requires affirmative action by the well owner or the Agency. The prohibitions for new siting within maximum setback zones differ from the prohibitions within minimum setback zones in that only new potential primary sources are prohibited in the former.

Regulated Recharge Areas

Regulated recharge area is defined at Section 3.67 of the Act:

> "Regulated Recharge Area" means a compact geographic area, as determined by the Board, the geology of which renders a potable resource groundwater particularly susceptible to contamination.

The procedures and conditions under which promulgation of a regulated recharge area may be undertaken are specified at Sections 17.3 and 17.4 of the Act; promulgation is undertaken according to the provisions for rulemakings found at Section 28 of the Act.

The instant regulations set up a separate Part, Part 617, into which adopted regulated recharge areas are to be eventually placed; to date, no proposals for promulgation of a regulated recharge area have been received by the Board.

Certification of Minimal Hazard

Section 14.5 provides for a "certification of minimal hazard" system by which the owner of any site otherwise covered by the 400 foot minimum setback provision of Section 14.2(d) or any of the provisions of Section 14.4 or regulations adopted

thereunder is exempted from the requirements of these two pieces of statute. This has particular import to today's regulations, since the existence of certification totally exempts that owner from the regulations.

Section 14.5 establishes that the certification process is initiated by the owner and is approved as to completeness and adequacy by the Agency or the Agency's delegate. Section 14.5 does not directly address the matter of appeal processes where an Agency finding on completeness and adequacy is adverse. However, in response to this matter the Agency notes:

> Under Section 14.5(c) of the Act, Agency action under Section 14.5(c)(1) and (2) is a final determination. Under Section 5(d) of the Act, "[t]he Board has the authority to conduct hearings . . . upon other petitions for review of final determinations which are made pursuant to the Act or Board rule and which involve a subject which the Board is authorized to regulate . . . (emphasis added)." Therefore it can be argued that Section 5(d) of the Act authorizes the Board to consider petitions for review of Agency final determinations under Section 14.5. (PC #9 at ¶10).

Water Quality Standards for Groundwater, Board Docket R89-14

In addition to the mandate of Section 14.4, the IGPA contains a mandate for promulgation of water quality standards found at Ill. Rev. Stat. 1989, ch. 111½, ¶7458. This mandate is being addressed in Board Docket R89-14(B)[1]. The Board took final action in the R89-14(B) docket on November 7, 1991.

The groundwater quality standards and accompanying regulations developed in the R89-14(B) proceeding interrelate with the instant regulations in many ways. For example, the R89-14(B) regulations identify constituents, including their numerical values, for which compliance is required under today's rules. Other aspects of the R89-14(B) rule that bear on the instant rules include defining compliance points, identifying classes of groundwater to which groundwater monitoring is to be targeted, and specification of the contents of preventive notification programs. The interested person is directed to the November 7, 1991 Board Opinion and Order in the R89-14(B) proceeding for a full presentation of the groundwater quality standards.

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[1] In the Matter of: Groundwater Quality Standards (35 Ill. Adm. Code 620).

OVERVIEW OF REGULATIONS

The Board will first present an overview of the salient elements of today's regulations. This overview is then followed by discussion of individual Parts and Subparts of the regulations.

Regulated Activities

Today's regulations apply only to a limited set of the number of possible activities within setback zones and regulated recharge areas. This limited set consists of the activities listed at Section 14.4(a)(1-5) of the Act. The activities that are included are (1) on-site[12] landfilling, on-site land treating, on-site surface impounding, and on-site waste piling, (2) storing in underground tanks, (3) storing and related handling of pesticides or fertilizers, (4) storing and related handling of road oils, and (5) storing and related handling of de-icing agents. The units affected by the regulations are further limited by exempting certain subclasses of units, such as most on-site units that are solely for the treatment, storage, and disposal of hazardous waste, livestock waste, landscape waste, or construction and demolition debris.

Besides guidance provided by the list at Section 14.4(a), controlling factors in determining which activities would be regulated under today's regulations are (1) whether the activity constitutes a potential source of groundwater contamination and (2) whether the activity is already controlled under existing State or Federal regulations or laws.

It should be noted that Section 14.4(c) of the Act contains a specific mandate to the Agency to propose additional regulations, beyond those considered herein, for control of the disposal of hazardous wastes and the off-site disposal of special and municipal wastes if, after required evaluation, existing State and Federal regulations are found to be insufficient to achieve groundwater protection consistent with Section 14.4(a). In this context, the instant regulations may be viewed as plugging a legislatively-identified regulatory gap, with additional regulations to follow as may be identified by additional Agency analysis. Moreover, they may be viewed a "first-cut" effort directed toward just those activities legislatively-identified as requiring attention.

Section 14.4 makes distinction between new and existing activities located within setback zones and regulated recharge areas. It also provides separate mandates for, and factors to be considered in, promulgation of regulations for the two classes of

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[12] "On-site" is defined in Section 615.102 of the proposal. The definition is identical to that found at 35 Ill. Adm. Code 702.110.

activities (cf, subsections (b) and (d)). Additionally, at subsection (a) explicit allowance is made for "more stringent provisions for those activities . . . which are not already in existence".

The fundamental distinction between new and existing activities is recognized in the organization of the regulations into two separate Parts, with Part 615 treating existing activities and Part 616 treating new activities. Although the internal arrangement and many specific provisions of the two Parts are similar, they differ in detail reflective of the distinction between new and existing activities and of the generally more restrictive provisions attached to new activities.

Regulation of On-Site Landfills and Waste Piles

The IGPA and the Act at Section 14.4 specifically identify on-site landfills as facilities for which groundwater protection regulations are to be promulgated. At Section 14.4(b) and (d) the IGPA and the Act further specify that the regulations address water quality monitoring, reporting, recordkeeping, remedial response, closure care, and pollution control measures. Accordingly, at 1st First Notice various provisions of this nature were proposed to be applied to landfills[13]. Subsequently, however, the Board in its R88-7 Docket adopted comprehensive regulations for solid waste disposal now found at 35 Ill. Adm. Code Parts 810 through 815. These regulations apply to all landfills identified in Section 14.4. Moreover, they put into place most of the specific landfill provisions identified at Sections 14.4(b) and 14.4(d). Given this circumstance, the Board at 2nd First Notice deleted from the instant proceeding those provisions that had already been effectuated through the operation of the R88-7 regulations.

One issue not addressed by the new landfill regulations is the issue of required closure of existing landfills (see discussion of Required Cessations and Closures, below). Accordingly, the required closure provisions are the only provisions of the landfill portions of Parts 615 and 616.

The IGPA also mandates at Section 14.4 the consideration of groundwater protection regulations related to waste piles. The Board notes that, through the operation of 35 Ill. Adm. Code 810.103, waste piles are landfills for the purpose of the Parts

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[13] 1st First Notice Sections 615.405 and 616.403 (Groundwater Monitoring), 615.406 (Operating Requirements), 615.407 and 616.408 (Closure and Post-Closure Care), 616.404 (Design and Operating Requirements), 616.405 (Monitoring and Inspection), 616.406 (Surveying and Recordkeeping), and 616.407 (Operating Requirements).

810 through 815 regulations. Thus, some of the IGPA waste-pile mandate is addressed by Parts 810 through 815 here.

Regulation of Pesticide and Fertilizer Facilities

The IGPA at Section 14.4(a) identifies pesticide and fertilizers facilities as specific targets for prevention of groundwater contamination. In addition, at Section 14.4(a), (b), and (d), the IGPA further specifies that the Agency propose and the Board adopt regulations directed at the targeted activities. It has nevertheless been posited that regulations already in place are sufficient, without any needed additions, to protect groundwater from agrichemical facilities (e.g., PC #15 at 2; PC #28). Principal among these is 8 Ill. Adm. Code 255 ("Part 255"), a body of regulations promulgated by the Illinois Department of Agriculture ("IDOA") with an effective date of January 1, 1990. Part 255 was developed as part of the State's groundwater protection strategy. The subjects and issues involved in Part 255 are summarized at 13 Ill. Reg. 13535-6, August 25, 1989:

> These rules were developed by the Illinois Department of Agriculture and the Illinois Environmental Protection Agency with valuable input from the Secondary Containment Rules Committee, which was made up of industry and academia.
>
> The purpose of these rules is to protect the environment by prevention of point source contamination by agrichemicals and these rules will be referenced by the Illinois Environmental Protection Agency in their setback rules which are to be filed with the Pollution Control Board as mandated by the Illinois Groundwater Protection Act.
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> These rules regulate agrichemical facilities and non-commercial agrichemical facilities. An agrichemical facility is a site used for commercial purposes, where bulk pesticides are stored in a single container in excess of 300 gallons of liquid pesticide or 300 pounds of dry pesticide for more than 30 days per year or where more than 300 gallons of liquid pesticide or 300 pounds of dry pesticide are being mixed, repackaged or transferred from one container to another within a 30-day period or a site where bulk fertilizers are stored, mixed, repackaged or transferred from one container or another. Non-commercial agrichemical facility is a site where storing pesticides or fertilizer for more than 45 consecutive days in a single container holding in excess of 300 gallons bulk liquid pesticides, or 300 pounds bulk dry pesticides, or 5000 gallons bulk liquid commercial fertilizer or 50,000 pounds bulk dry commercial fertilizer; the loading and mixing,

including bulk repackaging, of pesticides or fertilizer at a permanent site for more than a 45 day period in quantities in excess of the amounts established; and the non-commercial application of pesticides or fertilizer.

These rules set forth the procedures and time frame for registration, permitting, and construction. They also address general construction requirements for secondary containment of storage tanks and operational areas, as well as recordkeeping, management and operational procedures. They further delineate facility inspection, maintenance and closure requirements. Additionally, these rules set forth guidelines for connections to potable water supplies and the open burning of agrichemicals, agrichemical containers, and other agri-related chemical wastes.

While the Board believes that the Part 255 regulations are a necessary and valuable element in assuring environmental protection, it is not convinced that they constitute a sufficient program. The Board believes, along with the Agency (PC #23 at 37), that in addition to Part 255 there is need for regulations for groundwater monitoring, closure and post-closure care, reporting and recordkeeping, and remedial response measures[14]. It is these elements that are specified in today's regulations.

Besides the issue of whether there should be any regulation of agrichemical facilities at all, a significant portion of the testimony, comment, and debate generated in this proceeding has focused on the comparative authority to be given those data bases in which pesticides and fertilizers have been identified in groundwater. Thus, it is argued that data from the Agency, or from the Illinois Department of Public Health, or from DENR, or from IDOA, or even from Wisconsin or Minnesota or Iowa, etc., best characterize the magnitude of the groundwater contamination problem. In general, the Board does not find any of these data sets to provide it with singular guidance. Rather, the Board finds in them collectively ample demonstration of both the existence and potential for serious contamination of groundwater by pesticides and fertilizers, and hence grounds for the regulations today adopted.

In order to strike a balance between lessening the economic burden which may be placed on smaller operators and providing a reasonable degree of assurance that a facility's groundwater protection measures are effective, a semi-annual groundwater monitoring schedule for agrichemical facilities is incorporated at Sections 615.207 and 616.208, instead of the quarterly

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[14] Consideration of each of these elements is statutorily required at Section 14.4(b) of the Act.

monitoring schedule required by others, where certain conditions are met. Also, the post-closure monitoring requirement for agrichemical facilities at Sections 615.202 and 616.202 is three years, instead of the five-years associated with other types of regulated facilities. These changes were advocated by the Agency (Id.), and are also discussed below in the discussion pertaining to individual provisions.

Affected Wells and Lands

The number of affected wells is estimated to be more than 400,000 (R. at 29). Most of these are private wells serving an owner-occupied single family dwelling. Of the public wells, over 7,100 are non-community wells and approximately 3,649 are community wells (Id.). The community wells are approximately evenly split between those to which the 200-foot and 400-foot minimum setback zones apply (Id.).

Based on these figures, the Agency estimates that approximately 1.2 million acres (approximately 1/30 of the land area of the State) are located within minimum setback areas (R. at 29), largely associated with private wells.

The Agency further estimates that if all the areas of the State that can be assumed to qualify for regulated recharge area status are in fact so designated, that approximately one-half of the State would be involved (R. at 317-8).

Prescribed Control Measures

Subsections 14.4(b) and 14.4(d) prescribe the control factors which the Board must consider in today's regulations. In their general outline, these subsections require the Board to consider groundwater monitoring programs, recordkeeping and reporting, remedial and response measures, technical standards for pollution control, and requirements for closure and discontinuance of operations. The regulations closely tracks these several factors.

Absence of Permits

A salient feature of the instant regulations is that they are by design implemented entirely without permits (see PC #9 at ¶12). This is in part because many of the activities covered by the regulations are specifically exempted from permit requirements by Section 21(d) of the Act. Moreover, since most of the remaining activities covered by the instant regulations are also conducted outside existing permit programs, requiring permits to regulate these activities would by necessity require the establishment of new permit programs. However, the Agency has intentionally not proposed any new permit programs in the instant proceeding. The Agency notes that Section 14.4 is silent

on the matter of permits, which it views as purposeful. Moreover, the large number and variety of affected setback zones and activities, the permitting of which would impose an impractically large public and administrative burden. This would require shifting of substantial resources away from other environmental programs, to their detriment.

The Defenders have contended that the Board does have authority under the Act to implement the instant regulations via a permit system (e.g., PC #10 at 17-19). Whether this contention is correct or not, however, is not the immediate issue. The immediate issue is whether it is prudent to implement the instant regulations via a permit system. The Board agrees with the Agency that, at least at this time, it would be imprudent to build a permitting process into the instant regulations.

As the Board observed at 1st First Notice, in the absence of a permitting system the Agency is not able to provide the degree of oversight that it otherwise would. This can introduce problems not only for the environment, but also for the regulated community, which cannot so readily avail itself of the Agency's expertise. At 1st First Notice the Board introduced many provisions intended to lessen these problems.

Required Cessations and Closures

The instant regulations prohibit the continued use or operation of certain existing units within certain setback zones and regulated recharge areas. The prohibitions are:

1. Within a minimum set-back zone: all on-site units for landfilling or land treating or surface impounding of special and non-special waste, and all units for the storage and handling or road oils containing wastes; cessation to be effective two years after promulgation of Part 615 and closure to be completed three years after promulgation. (Sections 615.402, 615.422, 615.442, and 615.702).

2. Within a maximum set-back zone: all on-site units for landfilling or land treating or surface impounding of special waste; cessation to be effective two years after the effective date of the ordinance or regulation establishing the maximum setback zone and closure to be completed three years after the effective date of the ordinance or regulation. (Sections 615.403, 615.423, and 615.443).

3. Within a regulated recharge area: all on-site units for landfilling of special waste where the distance between the landfill and wellhead is less

> than 2500 feet[15]; cessation to be effective four years after promulgation of the regulated recharge area and closure to be completed five years after promulgation. (Section 615.404).

All of these required cessations and closures are subject to exception via the adjusted standard procedure of Section 28.1 of the Act and the minimal hazard certification provisions of Section 14.5 of the Act. In regulated recharge areas, the requirement also may be set aside as part of the regulation adopting the regulated recharge area.

At 1st First Notice the Board summarized the argument behind the required cessations and closures as follows:

> The justification for each of these required cessation and closures is similar. In each case, the activity is deemed to present a substantial threat to groundwater quality and use. Additionally, in each case the prohibition is against the activity for which there is a similar statutory prohibition against new sitings pursuant to Sections 14.2 and 14.3 of the Act. The intent, thus, is to eventually assure safe setback of all on-site landfilling, land treating, and surface impounding, irrespective of whether the activity is a new or existing activity. (Opinion at p. 19)

IERG had contended that, because the IGPA does not explicitly require cessation and closure of existing on-site landfills, land treatment units, and surface impoundments, there is no justification for requiring these closures (PC #17 at 4). In an opposite perspective, the Defenders contended that there also should be required closure within minimum setback zones of existing agrichemical facilities (PC #24 at 4-5 and PC #34 at 10), based on the record of groundwaters contaminated by pesticides and fertilizers. The Board adopts the required cessations and closures as recommended by the Agency.

The Board notes that Part 616 at Section 616.104(e) sets out an exception procedure for new facilities that is not explicitly included in Part 615 as an exception procedure for existing facilities. This is the exception procedure that flows from Section 14.2(c) of the Act and that allows the Board to exempt certain new facilities from the prohibition against siting within setback zones. If this provision were fully paralleled in Part 615, it would provide that certain existing facilities that would otherwise be required to close could be exempted from closure pursuant to Board findings on the factors listed in 14.2(c). The Board believes that equitable treatment of existing and new

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[15] Board Note: The 2500-foot distance is statutorily identified at Section 14.4(b) of the Act.

facilities requires such exemption possibility. However, the Board also believes that the adjusted standard process already serves this purpose, and hence that specific adaptation of 14.2(c) into Part 615 would be unnecessarily duplicative.

Patterning After Existing Regulations

Wherever possible, today's regulations are modeled after existing regulations applicable to activities of a similar nature. The purpose is to provide consistency of regulations between currently regulated facilities and facilities that are today brought under regulation for the first time. In general the model used is the Board regulations for hazardous waste facilities found at 35 Ill. Adm. Code 724, which most closely parallel the intent of and types of facilities covered by the instant regulations.

Refinement of the Terms "Activity" and "Activities"

A principal provision introduced by the Board at 1st First Notice was replacement of the word "activity" or "activities" as used in the Agency's proposal with the terms "owner or operator" and "unit" (or, in certain instances, "site" or "facility"), as was necessary to accomplish the intended meaning. This was done for several reasons. One reason is that the word "activity" denotes an action (e.g., landfilling, surface impounding), which in turn connotes the existence of both a person carrying out the action (e.g., an owner or operator) and an object to which the action is directed (e.g., landfills, surface impoundments). Indeed, today's regulations impose requirements on both such persons and such objects. However, use of the single word "activity" to refer to both persons and objects leads to many awkward and often grammatically inconsistent constructions. These constructions are best avoided.

Additionally, the change was made to provide unity between the instant regulations and other federal and Board regulations. In all other similar regulations the operative words are "owner", "operator", "site", "facility", and "unit"[16]. Accordingly, these are terms that are generally well understood by both the regulated community and the regulating agencies. Moreover, they have a proven record of utility. To replace these by the less-definite word "activity" seems at the expense of this common understanding and utility, and to invite unnecessary present and future confusion.

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[16] Definitions of "owner", "operator", "site", "facility", and "unit" are provided in Section 615.102 of the proposal. These definitions are identical to or modeled after the definitions found at 35 Ill. Adm. Code 745.102, 35 Ill. Adm. Code 720.110, Section 3.43 of the Act, 35 Ill. Adm. Code 720.110, and Section 3.62 of the Act, respectively.

The Board is aware that Section 14.4 of the Act itself most often uses the word "activity" to identify both who and what is to be regulated within the instant rulemaking. However, the Board notes that the Act and the IGPA also use the terms "site", "facility", or "unit" in identifying the specific objects to which groundwater protection is directed (e.g., Sections 3.59 and 3.60, and thereby Sections 14.1, 14.2, 14.3, and 14.5, of the Act). The constructions herein are therefore consistent with usage in the Act.

Thus, while the term "activity" remains useful for describing the general direction of the instant regulations, it is usually not apt for constructions within the regulations themselves. Accordingly, as used herein, the person responsible for compliance is identified as the "owner or operator". Similarly, the basic object subject to regulation is the "unit". Thus, for example, the prohibition against use or operation found at Section 615.402 is directed toward the owner or operator of a landfill unit.

DISCUSSION OF PART 601

The intent of the amendment to 35 Ill. Adm. Code 601 is to conform the definition of groundwater found there with the definition found in the IGPA. This intent was originally noted by the Board in an earlier proceeding, R86-8, A Plan for Protecting Illinois Groundwater (Report of the Board, August 28, 1986). There the Board noted the inconsistency between the Part 601 definition and other definitions of the same term. In response the Board noted (p. I-4):

> The . . . definition is not only inconsistent with the conventional definition of groundwater, but also appears to be inconsistent with use and definitions found elsewhere within Illinois statutes [Ill. Rev. Stat. ch. 111½, ¶1003] and the Board's regulations [34 Ill. Adm. Code 301.420]. In particular, the Section 601.105 definition appears to establish an identity between "ground water" and "underground water", whereas conventional use considers groundwater to be a subset of underground water (R. at 1531). Since these differences in definition appear to be the source of some confusion, the Board will propose to amend these definitions in the earliest possible regulatory proceeding.

The amendment adopted today rectifies this inconsistency.

The Board also notes that in several portions of the Board's Public Water Supply (Subtitle F) rules and regulations the term "ground water" is spelled as two words. In contrast, within the

Environmental Protection Act and most other state statutes, as well as elsewhere within the Board's rules and regulations, the spelling is in the more commonly encountered form of a single word, "groundwater". Given that both spellings occur in technical literature, and that it is commonly understood that there is no distinction between the two terms other than in the spelling, the Board does not believe that changing the spelling within Subtitle F is here justified.

DISCUSSION OF PART 615

Part 615 sets forth standards for "Existing Activities in a Setback Zone or Regulated Recharge Area", pursuant to the mandate of Section 14.4(b) of the Act.

Both here and in Part 616 a number of changes in the nature of technical corrections have been made to the proposed regulations at various stages in this proceeding. For the most part these are not specifically discussed herein.

Part 615, Subpart A: General

Subpart A sets forth the general provisions applicable to the entire Part.

Section 615.101 sets out the general purpose of the Part. The Board notes that there is some particular import to the language "located wholly or partially within a setback zone or regulated recharge area". Given the sharp boundary of most setback zones (or even regulated recharge areas), the Board believes that it may be common that an otherwise affected unit will lie partly within and partly outside the setback zone (e.g., the unit extends from less than 200 feet to more than 200 feet away from a well which establishes a minimum setback zone). The Board believes that the intent of the IGPA is clearly to regulate such "split" units.

At the same time, however, the Board does not believe that the IGPA intends that the regulations apply to the entirety of a facility or site that contains multiple units, and for which the only otherwise affected units are located outside the setback zone or regulated recharge area[17]. Thus the emphasis in the applicability statement is on the unit(s) that are located wholly or partially within the setback zone (or regulated recharge area). Similarly, the Board would not find it inconsistent with

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[17] The Agency also intends that the regulations apply only to "that portion [of an activity] which is actually located within a setback zone or regulated recharge area" (PC #9 at ¶3, emphasis added). The Board believes that this position is equivalent to that here presented by the Board.

the IGPA or the instant proposal if an owner or operator of a multiple-unit facility or site complied with the current rules only for those units located wholly or partially within the relevant setback zone or regulated recharge area.

Section 615.102 contains definitions applicable to the Part. The intent is to bring into the Part all those definitions that are required for a reading of the Part, and thus to allow the Part to stand on its own as much as possible. Many of the definitions have been borrowed from other Board regulations, particularly from 35 Ill. Adm. Code 720 and 724. In addition, particular attention has been paid to making the definitions consistent with the definitions found at 35 Ill. Adm. Code 620, in accord with the close interrelationship between Part 620 and today's regulations.

The definitions have undergone various modifications from those originally proposed by the Agency. These modifications will not be tracked here; rather the interested person is directed to the earlier Opinions in this proceeding for greater details (1st First Notice Opinion, p. 22; 2nd First Notice Opinion, p. 24-6; Second Notice Opinion, p. 3-4).

Section 615.103 sets forth incorporations by reference. The format is that standardly used in the Board's rule and regulations. As with the definitions, the incorporations by reference have undergone some evolution during the course of this proceeding. The interested person is directed to the early Opinions (see above) for a review of this procedural history.

Section 615.105 sets forth the various general exceptions to the applicability of Part 615. The first of these exceptions is that the Part does not apply if an otherwise regulated facility or unit possesses a minimum hazard certification pursuant to Section 14.5 of the Act. This provision is included in the instant proposal based on the directive at Section 14.4(b) of the Act that " . . . the Board shall ensure that the promulgated regulations are . . . not pre-emptive of the certification system provided by Section 14.5" of the Act.

Subsections 615.105(b) and 615.105(c) note that exceptions may flow as the result of an adjusted standards proceeding, site-specific rulemaking, or a regulated recharge area proceeding. The subsections are intended only to alert interested persons to the possibility that requirements alternate to those in Parts 615 and 616 might apply if such are authorized in any of these alternate rule-making modes.

The Agency has suggested that a literal reading of language found at 1st First Notice Sections 615.105(b) and (c) and 616.105(b) and (c) might provide that if a person "obtains any 'different requirements' under an adjusted standard or regulated recharge area proceeding, none of the other requirements

contained in Parts 615 or 616 would apply even if these other requirements were not the subject of adjusted standard or regulated recharge area proceedings" (PC #23 at ¶21). The Board believes this to be an unfounded concern, since in any of the three alternate standards proceedings it is to be expected that any "relief" authorized would be clearly delineated and granted only after a full and careful consideration of all ramifications.

Subsections 615.105(d) and 615.105(e) set forth exceptions that flow from Sections 14.4(b)(A) and (B) of the Act. The language used in these provisions is the language of the Act, except that negation is used in 615.105(e) to conform the language to the structure of Section 615.105.

Part 615, Subpart B: Groundwater Monitoring

Subpart B establishes groundwater monitoring and associated requirements, including a corrective action program. The Subpart is broadly modeled after 35 Ill. Adm. Code 724.Subpart F, which establishes similar requirements for hazardous waste facilities. Among the principal differences is that Subpart B is not implemented via permit (see preceding discussion), whereas the provisions of 35 Ill. Adm. Code 724.Subpart F are.

The Defenders had asked prior to 1st First Notice (PC #10 at 16-19), that, in the absence of a permit, various activities required of an owner or operator be undertaken with the assistance or under the direction of a person with credentials in hydrogeology (PC #24 at 8). As 1st First Notice the Board declined to do so. The Board affirmed that professional competence is essential in making groundwater monitoring decisions. However, it based it decision, and continues to do so, on the absence of a certification, accreditation, or other program that offers verification of the competence required.

Section 615.201 identifies the facilities or units for which groundwater monitoring is required. These are on-site surface impoundments, and facilities or units for the storage and handling of pesticides, fertilizers, road oils, and de-icing agents. The groundwater monitoring requirement is specifically not required for underground storage tanks. Additionally, the otherwise affected facilities or units may be exempted pursuant to an adjusted standard or regulated recharge area rule.

It is to be noted that waste piles are landfills pursuant to Section 810.103, and that existing on-site landfills are required to monitor groundwater pursuant to 35 Ill. Adm. Code 814. Thus, groundwater monitoring is required for waste piles.

Section 615.201 is redundant to the extent that it repeats applicability statements found in Subparts D, F, I, J, K, and L. However, it is believed that this repetition has value in guiding persons through the instant rules.

Section 615.202 prescribes that the required groundwater monitoring period consists of the active life of the unit, including its closure and post-closure care periods. It further specifies that the post-closure care period is five years for all units subject to the instant Part[18], except for pesticide and fertilizer facilities for which the post-closure care period is three years[19]. Additionally, post-closure care is to be continued beyond the three or five years until such time as any required corrective action is completed (see Section 615.211).

The Defenders had requested that the post-closure care period for surface impoundments also be 15 years (PC #10 at 22). However, the time periods involved in post-closure care as here adopted are consistent with the required term of post-closure care in other Board regulations and the Act. The Board does not believe that sufficient justification for an exceptional period of care for the type of surface impoundments herein under consideration has been presented in this record. Similarly, the Defenders had requested that the post-closure care period for pesticide and fertilizer facilities be five years.

Section 615.202 also provides that the active life of a facility subject to Subpart B begin no earlier than one year after the effective date of the Part. The intent is to allow all affected facilities a maximum of one year within which to take the steps necessary to comply with the requirements of the Subpart. This is deemed necessary since requirements such as siting and developing monitoring wells will require lead time.

The Agency had suggested that Section 615.202 might be better placed within Subpart A rather than Subpart B (PC #23 at ¶22). The Agency observes that there are compliance periods for requirements other than those contained in Subpart B. While the Agency is clearly correct in this observation, the Board does not believe that its suggested remedy is workable. Section 615.202 is essentially a definitional section wherein the term

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[18] At 1st First Notice it was specified that the post-closure care period for landfill units was 15 years or such longer period as may be set by Board regulations. Post-closure care is now set in Parts 811 through 815 at 5 to 30 years, depending upon the nature of the material contained in the landfill.

[19] This provision is was added at 2nd First Notice based upon suggestion of the Agency (PC #23 at ¶37), which in turn was based on the observations of IFCA.

"compliance period" is defined as it is used within Subpart B[20]; the term is used nowhere else within Part 615.

Section 615.203 specifies that the owner or operator of any unit subject to Subpart B must comply with groundwater standards adopted by the Board. Pursuant to the definition of groundwater standards at 615.102 these standards are the groundwater-specific standards mandated in the IGPA and found at Part 620.

Section 615.203 further specifies that compliance with the groundwater standards is to be for the full compliance period and that compliance is to be measured at the compliance point or points. The latter term is defined at 615.102, along with a related definition for "unit boundary". The unit boundary is the perimeter of the area at the surface of the land on, above or below which an affected unit is located. A compliance point is any of those points within a Class I through III groundwater which exist directly beneath the unit boundary in the direction(s) toward which groundwater flows. If the groundwater flow beneath a unit is in different directions at different depths or at different times, there could be more than one compliance point and compliance points could be other than vertically arrayed.

To the extent that "unit boundary" and "compliance point" are intended to define monitoring requirements and the need for corrective action, the definitions are designed under the premises that contamination must be identified as close to its source as is practicable (for example, it is generally infeasible to monitor directly beneath an affected unit) and that contamination must be contained and addressed, when it is found, as close to its source as possible.

Section 615.204 prescribes groundwater monitoring system requirements. Its main provisions are directed to the sufficiency of the monitoring network and well design and construction.

A monitoring network is sufficient if it allows sampling of the background groundwater quality and the quality of groundwater passing the compliance point or points. Under certain circumstances, as specified in subsection (b), an owner or operator may use an existing well as a monitoring well. This provision is allowed to provide economy where circumstances warrant. The standards for well design and construction follow accepted practice (R. at 54; Exh. 78, Attachment B).

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[20] Once each at Sections 615.203(a), 615.207(a), and 615.207(b), and three times at Section 615.211(e). Similar usages occur in Part 616.

Determination of the sufficiency of the number and location of monitoring wells is to be made by the owner or operator. As regards this matter, the Board directs attention to the foregoing discussion under "Absence of Permits".

Section 615.205 prescribes protocols for groundwater sampling. The intent is to have established a consistent sampling protocol to assure that sample results can be compared from event to event. There are also specific requirements that the groundwater surface elevation be determined for each sample and that groundwater flow rate and direction be determined at least annually. The latter provisions are intended to assure that movement of contaminants can be readily addressed.

The Defenders recommended that the owner or operator of each affected facility be required to file with the Agency, within one year after the adoption of these rules, a report specifying various items (PC #24 at 6-9; PC #34 at 4-6). The items include characterization of the three-dimensional groundwater flow system underlying the facility, a description and rationale for the number and location of monitoring wells, and description of the data and qualifications of the individual upon which the report is based. The Defenders contended that this information is necessary if the Agency is to review and evaluate the tasks required of owners and operators (PC #24 at 7).

At 2nd First Notice the Board noted that it shares the Defenders concern about adequate oversight of the various monitoring requirements in today's rule (2nd First Notice Opinion at p. 31). The Board added that it has an independent concern that there be available in the public record information upon which public policy may be reasonably predicated. At the same time, the Board noted its apprehension about regulatory and administrative overburden, and asked interested persons to advise the Board on how to find the proper balance among these concerns (Id.).

In response, both the Agency and Defenders renewed their former position. The Agency observed that landfills are already required to provide very detailed data pursuant to 35 Ill. Adm. Code 811. As regards other types of activities covered under the instant rule, the Agency responded that the Defenders' recommendation would be contrary to the intent and desirability of having the instant rules be self-implementing, that the Agency can perform facility inspections to assure that facilities are complying, and that there are various public groundwater data bases under development by the Agency or otherwise available (PC #32 at ¶5). The Board thereupon accepted the Agency's recommendation of adding no additional reporting requirements (Second Notice Opinion at p. 10).

Section 615.206 prescribes the parameters which are to be sampled. For most facilities these parameters are those

contaminants which are present at the facility and for which the Board has adopted a groundwater standard.

Sampling of special parameters are specified for two activities: storage and handling of pesticides and fertilizers. Pesticide activities are required to sample for five specific pesticides or five groups of chemically-similar pesticides which are stored or handled at the facility, which are most likely to enter the groundwater, and which are the most toxic. A list of five criteria, including volume stored or handled, leachability, toxicity, spillage history, and existence of groundwater standards, is presented as a guide to the owner or operator for selection of the pesticides to be monitored.

An activity involving handling or storage of fertilizers requires monitoring of five specific parameters: pH, total organic carbon, nitrates as nitrogen, ammonia nitrogen, and specific conductance. The Agency believes that these parameters constitute a sufficient list to determine whether spillage or leakage of fertilizers has occurred, and hence are sufficient for routine monitoring. More extensive monitoring may be required if corrective action must be undertaken pursuant to Sections 615.209 through 615.211.

Section 615.207 sets out required sampling frequencies. For all affected facilities sampling is required quarterly, except for certain facilities for the storage and handling of pesticides or fertilizer, for which sampling is required semi-annually (subsection b), and for facilities for the storage and handling of road oils and de-icing agents, for which sampling is required annually (subsection (c)). The quarterly monitoring requirement is premised upon the following observations:

> Sampling at quarterly intervals helps assure that seasonal variations in groundwater can be accounted for when the sample results are reviewed. Moreover, quarterly monitoring strikes a reasonable balance that results in a sampling frequency that helps assure that a release will be detected at an early stage, and yet is not so frequent as to be overly burdensome to owners and operators of units. (PC #23 at ¶5)

The provision that allows certain facilities for the storage and handling of pesticides or fertilizer to sample semi-annually was introduced at 2nd First Notice. Under the 1st First Notice proposal all affected pesticide and fertilizer facilities would have been required to sample quarterly. Various objections to this provision had been raised by IFCA and IDOA. IDOA also suggested that the 1st First Notice quarterly requirements were overly onerous to facilities that have containment structures in place and that have shown that groundwater impacts have not occurred (PC #22 at 12-13).

The Board does not believe that eliminating all monitoring requirements for affected pesticide and fertilizer facilities is acceptable as a rule-of-general-applicability. Neither does the Board believe that it would be acceptable to require monitoring only after off-site occurrences of contamination have been recognized[21]. Either circumstance is viewed as not compatible with the mandate of the IGPA to reduce risk to the State's groundwaters. The Board agrees with the Agency that the monitoring component of the proposed regulations is "an essential element of the groundwater protection scheme, providing notice of contamination in its earlier stages", and allowing for initiation of nondegradation and preventative response measures to maintain or restore the integrity of potable supplies (PC #23 at 37). This preventive aspect of the regulations would be lost should the Board only require groundwater monitoring after contamination is discovered at an off-site location.

In recognition of these views, the Board at 2nd First Notice halved the quarterly monitoring requirement for those facilities deemed to present lesser risks. The qualifications for this lesser requirement follow the general recommendation of the Agency (PC #23 at ¶37) (See also discussion above at pp. 17 and 18).

Section 615.208 specifies that the results of monitoring must be reported to the Agency on a regular basis.

Section 615.209 sets out procedures to be followed when monitoring shows that a groundwater standard has been exceeded. The Agency must be notified of such exceedences. Additionally, the owner or operator must accelerate the sampling frequency and, in some cases, expand the list of sampled parameters. For most facilities it is required that the groundwater be resampled within three days. For pesticide facilities it is also required that the resampling address each pesticide previously and presently handled at the facility.

Section 615.209 further requires that an owner or operator start a corrective action program if the accelerated sampling confirms that groundwater standards are exceeded. The requirement is waived if the owner or operator can demonstrate pursuant to Section 615.210 that a source other than the regulated facility is the cause of the exceedence or that the monitoring results were spurious due to error in sampling, analysis, or evaluation.

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[21] IDOA suggests, among other matters, that certain facilities that have containment and that have no prior history of causing groundwater contamination should be "relieved of the requirement for groundwater monitoring until such time as a detection of another off-site sampling entity would trigger the facility to sample the on-site well" (PC #22 at 13).

It is to be noted that there is a difference between the triggering mechanism for corrective action here and that found at 35 Ill. Adm. Code 724.Subpart F. There corrective action is necessary if an increase above the background concentration is detected in any monitoring well, even if the increase does not violate a groundwater standard. However, under Section 615.209 corrective action is necessary only if a groundwater standard is exceeded at any monitoring well.

Section 615.210 sets out the requirements for making an alternate non-compliance response. The principle is that if the standard is caused to be exceeded by other than activities at the affected facility, the owner or operator need not assume responsibility for corrective action. Similarly, if the exceedence of the standard is only apparent due to error in sampling, analysis, or evaluation, the owner or operator need not undertake corrective action.

A significant provision of Section 615.210 is the specification that the facility which is being monitored is presumed to be responsible for the standard being exceeded, and that it is the responsibility of the owner or operator who elects this alternate non-compliance response to overcome this presumption. This provision was introduced at 1st First Notice on the well-taken suggestion of the Defenders that the affected owner or operator should bear the burden of proving that the contamination originated from some other source or was due to error in the sampling required of the owner or operator (PC #10 at 16).

Section 615.211 prescribes the corrective action program that must be undertaken by an owner or operator when a groundwater standard is found to be exceeded. The result of the corrective action program is compliance with the standards. Accordingly, the corrective action program must be continued until it is demonstrated that the standards are no longer exceeded.

Part 615, Subpart C: General Closure and Post-Closure Requirements

Subpart C establishes general closure and post-closure requirements applicable to certain existing facilities and units. Additional closure requirements specific to these individual facilities or units are contained in following Subparts which pertain to the individual types of facilities or units.

In general, the closure and post-closure requirements are modeled after similar requirements applicable to hazardous waste facilities as found at 35 Ill. Adm. Code 724. The Agency believes, and the Board concurs, that it is not appropriate to establish closure/post-closure procedures for facilities subject

to the instant rules that are different from the requirements placed on facilities that are subject to the permitting requirements of Part 724.

Section 615.301 lists the types of facilities or units to which the provisions of Subpart C apply. Included are land treatment units, on-site surface impoundments, and facilities for the storage and related handling of pesticides and fertilizers. It is to be noted that some facilities or units otherwise affected by this Part, including underground storage tanks and storage and handling of road oils and de-icing salts, are not subject to the requirements of Subpart C.

In both the Agency's proposal and at 1st First Notice on-site landfills were specifically included in the applicability statement at Section 615.301, and waste piles were specifically excluded. Upon promulgation of the Board's landfill regulations in R88-7, existing on-site landfills became subject to the landfill closure and post-closure requirements found at 35 Ill. Adm. Code 811. Rather than duplicate these requirements in Part 615, the Board at 2nd First Notice eliminated the on-site landfills from the Subpart C applicability statement. Waste piles are also subject to the closure requirements of Part 811 through the operation of 35 Ill. Adm. Code 810.103.

Section 615.302 establishes the closure performance standard. The standard is patterned after and similar to the closure standard of 35 Ill. Adm. Code 724.211 for hazardous waste facilities.

The Agency persuasively points out that closure should be carried out in a way that "controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of waste, waste constituents, leachate, contaminated runoff or waste decomposition products to" all parts of the environment (PC #23 at ¶33); at 1st First Notice only escapes to "the ground" were specified. Accordingly, at 2nd First Notice escapes to "soils, groundwaters, surface waters, and the atmosphere" are specified.

Section 615.303 requires that a certificate of closure must be signed by a registered professional engineer, as defined at 615.102. This certification is intended to help assure that an affected unit is closed in accordance with Board standards. Section 615.203 is patterned after and similar to the certificate of closure provision of 35 Ill. Adm. Code 724.215 for hazardous waste facilities. Today's regulations retain the Agency's recommendation that the registered professional engineer not be an in-house engineer (i.e., that the engineer be "independent"). The requirement that a registered professional engineer who

performs tasks such as closure certification be "independent" is a normal requirement in both USEPA and Board regulations[22].

Section 615.304 requires that a survey plat must be filed with the appropriate local zoning authority for units that dispose of waste or facilities for the storage and handling of pesticides or fertilizers. This requirement is patterned after and similar to the survey plat requirement of 35 Ill. Adm. Code 724.216 for hazardous waste facilities.

Growmark expressed concern over regulatory overlap between today's regulations and various portions of Part 255 (see Discussion of Regulation of Pesticides and Fertilizer Facilities, above). Among particulars, Growmark observed (PC #28 at 7) that both Section 615.304 (and Section 616.304) and Part 255 at Section 255.70 require maintenance and reporting of survey information. In response, at Second Notice, the Board allowed that Sections 615.304/616.304 and Section 255.70 may contain some overlapping requirements. However, it also observed that the requirements are decidedly not identical. Nevertheless, the Board added a new paragraph to Section 615.304, which provides that records required by other authorities which contain the same information as required under Section 615.304/616.304 satisfy this requirement. The concept and form of the addition is identical to that found at Section 255.70(b), hence establishing a reciprocity between the two rules.

Section 615.305 requires owners and operators of affected waste disposal units to file with the Agency, County Recorder, and local zoning authority within 60 days after the closure of a unit a record of the type, location, and quantity of waste disposed at the unit. This regulation is patterned after and similar to the post-closure notice requirement of 35 Ill. Adm. Code 724.619(a) for hazardous waste facilities.

Section 615.306 provides that a certificate of completion of post-closure care, signed by an independent (see discussion of Section 615.303) registered engineer, must be filed with the Agency. This regulation is patterned after and similar to the post-closure certification requirement of 35 Ill. Adm. Code 724.220 for hazardous waste facilities.

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[22] E.g., 35 Ill. Adm. Code 724.215, 724.220, 724.243(i). 724.245(i) 724.247(e), 724.292(a). 724.292(b), 724.293(i). 725.215, 725.220, 725.243(h), 725.245(h), 725.247(e), 725.291(a), 725.292(a), 725.292(b). 725.292(a), 725.293(i), 725.296(f), and 811.502.

Part 615, Subpart D: On-Site Landfills

Subpart D requires the closure of certain landfill units. For the Subpart to apply, several tests must be met, as specified at Section 615.401. These are:

1) The unit is an existing unit pursuant to the definition of "existing" at 615.102.

2) The unit is located wholly or partially within either a setback zone of a potable water supply well or within a regulated recharge area.

3) The waste contained within the unit is generated on-site, pursuant to the definition of "on-site" at 615.102.

4) The unit contains waste other than hazardous waste, livestock waste, landscape waste, or construction and demolition debris.

5) The unit is not exempt from Part 615 pursuant to any of the exemptions identified at 615.105.

These tests are for the most part based upon the prescriptions of Section 14.4(a) of the Act, which sets out the scope of activities intended to be regulated under the instant rulemaking. See the preceding under the heading "Required Cessations and Closures" for a general discussion of this provision.

In both the Agency's proposal and at 1st First Notice various operating requirements were also specified for existing landfill units at then Sections 615.405 through 615.407. These were deleted at 2nd First Notice in recognition of the promulgation in R88-7 of 35 Ill. Adm. Code 810 through 815 (see discussion, Regulation of On-Site Landfills and Waste Piles, above).

Part 615, Subpart E: Land Treatment Units

Subpart E establishes special requirements for affected land treatment units. For a land treatment unit to be subject to the Subpart, it must meet the same tests that a landfill needs to meet to be subject to Subpart D (see above).

The principal provision of Subpart E is the required closure of certain land treatment units, as specified in Sections 615.422 and 615.423. The closure requirements are identical with those contained in Subpart D pertaining to landfills, except that land treatment units located in a regulated recharge area are not required to close. See the preceding under the heading "Required Cessations and Closures" for a general discussion of this provision.

Prior to 2nd First Notice the Agency observed that a provision pertaining to land treatment of sludges from wastewater treatment plants and potable water treatment plants recommended by the Agency and found at 616.Subpart E was not included at 1st First Notice in the parallel 615.Subpart E. The Agency then postulated, correctly, that this was an inadvertent exclusion (PC #23 at ¶35). The provision reads:

> Nothing in this Subpart shall prohibit land treatment within a maximum setback zone of sludge resulting from the treatment of domestic wastewater or of sludge resulting from the treatment of water to produce potable water, if such activities are conducted in accordance with the Act and 35 Ill. Adm. Code: Subtitle C.

At 2nd First Notice this provision was added back to 615.Subpart E at Section 615.424.

The only other provision of Subpart E is that closure of affected land treatment units is subject to two of the general closure requirements found in Subpart C: Section 615.302, the general Closure Performance Standard requirement, and Section 615.303, the general Certification of Closure requirement. At 1st First Notice affected land treatment units were required to meet all the requirements of Subpart C, not just Sections 615.302 and 615.303. However, the Agency correctly observed prior to 2nd First Notice that the remaining general closure requirements of Subpart C are inappropriate for existing land treatment units (PC #23 at ¶32).

Part 615, Subpart F: Surface Impoundments

Subpart F establishes special requirements for affected surface impoundment units. For a surface impoundment unit to be subject to the Subpart, it must meet the same tests that a landfill needs to meet to be subject to Subpart D (see above).

A principal provision of Subpart F is the required closure of certain surface impoundment units. See the preceding under the heading "Required Cessations and Closures" for a general discussion of this provision.

Section 615.444 prescribes that the owner or operator of any surface impoundment unit subject to Subpart F shall comply with the groundwater monitoring requirements and program of Subpart B.

Section 615.445 requires that operating surface impoundments be inspected weekly and after storms for the purpose of detecting any malfunctions of the impoundment that could lead to releases to groundwater.

Section 615.446 establishes several additional operating requirements applicable to affected surface impoundment units. These include a prohibition against placing incompatible materials in a surface impoundment unit, patterned after 35 Ill. Adm. Code 724.413, and requirements to be met if the surface impoundment is discovered to leak, patterned after 35 Ill. Adm. Code 724.327.

Section 615.447 establishes standards for closure and post-closure care of affected surface impoundment units. Three pathways are specified, depending upon whether the closure is by complete removal, partial removal, or no removal. The Section is patterned after and similar to 35 Ill. Adm. Code 724.328.

Part 615, Subpart G: On-Site Waste Piles

Subpart G establishes special requirements for affected waste piles. For a waste pile to be subject to the Subpart, it must meet the same tests that a landfill needs to meet to be subject to Subpart D (see above). The principal provisions of Subpart G consist of required closure of certain waste piles and of design and operation standards for others.

Section 615.462 establishes the conditions under which certain waste piles are required to close. Pursuant to the landfill regulations adopted in R88-7, certain types of on-site waste piles are now subject to the same regulations applicable to on-site landfills. To assure that this same principal be continued into the present rules, the Board at Second Notice accepted the recommendation of the Agency that those waste piles that are treated like landfills for the purpose of the R88-7 regulations also be treated like landfills[23] for the purpose of the instant regulations (PC #32 at ¶1, 2, and 6). This is done at Section 615.462, where there is applied the same standard for distinguishing landfills and waste piles as found in the definition of "waste pile" at 35 Ill. Adm. Code 810.103.

Section 615.463 specifies design and operating requirements applicable to those waste piles not subject to required closure. The goal of these requirements is to minimize the possibility of escape of leachate, runoff, and wind-blown debris from the waste piles. The principal provision is a requirement that an affected waste pile be covered to protect it from precipitation. Other provisions include a prohibition against placing free liquids in a waste pile, required protection against surface water run-on, required protection against wind dispersal, and required control of infiltration. Owners or operators of regulated waste piles

[23] As noted at 2nd First Notice, the only requirements applicable to existing on-site landfills generated in the instant regulations are the requirements to close found in Section 615.402, 615.304, and 615.404.

are given six months from the date of first applicability of today's rules to comply with these design and operating requirements.

Prior to Second Notice the Metropolitan Water Reclamation District of Greater Chicago ("District") requested an exemption from the requirement that waste piles be covered by an impermeable membrane or cover, with the exemption to apply to waste piles that consist of POTW wastewater sludge where the sludge piles are situated on underdrained paved surfaces and the units are operated in accordance a valid Agency permit. The District observed that its sludge drying piles are so constituted and permitted, that groundwater adjacent to its sludge drying areas is monitored biweekly, and that any leachate which penetrates the pavement is collected and returned to the District's plants (PC #29). The District therefore opined that sufficient protection against possible groundwater contamination is already present (Id.). The Board observed:

> The Board accepts the thrust of the District's position. The Board notes, however, that sludge piles of the District's type are already regulated under other rules and regulations, which include requirements for protection of groundwater. In keeping with the theory that today's regulations are intended to fill regulatory gaps, the Board would not expect the regulations to apply to the District's sludge piles. To assure that this reading is clear, the appropriate course of action is to explicitly exempt the subject sludge piles.

This exemption is achieved at subsections 615.461(b).

Section 615.464 specifies closure requirements for waste piles, applicable whether the closure is required or otherwise. It establishes that the sole method of allowable closure of a regulated waste pile is closure by removal and disposal of the waste and of any containment system components that may have been used.

Part 615, Subpart H: Underground Storage Tanks

Subpart H establishes special requirements for existing underground storage tanks that contain special waste. Its principal provision is that affected storage tanks that are located within setback zones or regulated recharge areas must comply with the requirements of 35 Ill. Adm. Code 731 even if any of the exemptions of 35 Ill. Adm. Code 731.101(b) would otherwise apply. 35 Ill. Adm. Code 731 is identical in substance to 40 CFR 280.

Part 615, Subpart I: Pesticide Storage and Handling Units

Subpart I establishes special requirements for facilities and units for the storage and handling of pesticides. For the Subpart to apply, several tests must be met. These are:

1) The facility or unit is an existing facility or unit pursuant to the definition of "existing" at 615.102.

2) The facility or unit is located wholly or partially within either a setback zone of a potable water well or within a regulated recharge area.

3) The facility or unit:

   a) is operated for the purpose of commercial application; or

   b) stores or accumulates pesticides prior to distribution to retail sales outlets, including but not limited to units which are warehouses or bulk terminals.

Subpart I is similar to Subpart G in that it does not require closure of affected facilities or units, but rather specifies design and operating requirements that must be met by the owner or operator.

The principal provision of Subpart I is the specification of certain design and operating requirements particular to the facilities regulated under the instant Part. These include compliance with the groundwater monitoring and closure/post-closure requirements of Parts B and C, maintenance of written inventory records, weekly inspections for leaks and deterioration of structures, and a requirement that all containers of pesticides be contained within a secondary containment structure.

A principal question regarding Subpart I has been how to recognize IDOA's regulations found at 8 Ill. Adm. Code 255 (see discussion of Regulation of Pesticide and Fertilizer Facilities, above). The Agency initially proposed that the Board require compliance with Part 255 as a provision of Subpart I. Subsequently both the Agency and the Defenders proposed that the Board adopt the entirety of the Part 255 regulations into the Board's regulations (PC #23 at ¶8; PC #24 at 10). Later the Agency proposed that the Board "cross-reference" certain sections of Part 255, with cross-referencing referring to a listing of those portions of Part 255 with which affected facilities would be required to comply (PC #32 at ¶7). The Board has rejected each of these proposals as being beyond its authority or consisting of improper indirect adoption of rules.

At 2nd First Notice the Board proposed to address the Part 255 question by inserting after Sections 615.603 and 616.604 a Board Note indicating that affected facilities or units might also have to comply with the Part 255 rules. The purpose of the Board Note is to alert interested persons to the Part 255 rules, while not giving an unwarranted authority to either the Board or the Agency.

Part 615, Subpart J: Fertilizer Storage and Handling Units

Subpart J establishes special requirements for facilities and units for the storage and handling of fertilizers. Subpart J is essentially identical to Subpart I, except for its application to fertilizers facilities and units rather than to pesticide facilities and units.

Part 615, Subpart K: Road Oil Storage and Handling Units

Subpart K establishes special requirements for facilities and units for the storage and handling of road oils. For the Subpart to apply, three tests must be met. These are:

1) The facility or unit is an existing facility or unit pursuant to the definition of "existing" at 615.102.

2) The facility or unit is located wholly or partially within either a setback zone of a potable water well or within a regulated recharge area.

3) The facility or unit stores or accumulates more than 25,000 gallons of road oils at any one time.

Section 615.702 prescribes the required closure by date certain of those regulated road oil units that are located in a minimum setback zone and where the road oils contain waste. Closure is required to be completed within two years after the date of first applicability. Closure is not intended to be required if the unit ceases storing or handling road oils prior to this time (see PC #9 at ¶34).

As initially proposed, the required closure applied only to units that store or handle road oils that contain wastes. At 2nd First Notice the Board noted that it was uncomfortable with this matter, and particularly with the apparent assumption that road oils that contain wastes somehow present an inherently greater risk to groundwaters than do virgin oils. The Board also observed that the Act, in requiring that road oil be regulated, makes no distinction between road oils with wastes or road oils without wastes. The Board accordingly requested that interested persons address this matter.

On the basis of responses received (PC #32 at ¶8; PC #34 at 14), the Board concluded at Second Notice that it was unpersuaded

that there is a basis for distinguishing road oils containing wastes from virgin road oils in the context of the instant regulations. Accordingly, the Board deleted the "containing wastes" provision.

Section 615.703 prescribes that the owner or operator of any unit subject to this Subpart shall comply with the groundwater monitoring requirements and program of Subpart B.

Section 615.704 sets out various design and operating requirements applicable to above-ground storage tanks. For the purposes of Part 615, an above-ground storage tank is defined at Section 615.102 as a storage tank that is not an underground storage tank.

Design and operating requirements include providing and maintaining primary and secondary containment, as well as various prohibitions against operating practices. The design and operating requirements are patterned after and similar to 35 Ill. Adm. Code: Subpart J (PC #9 at ¶36). These design and operating requirements are specified in subsection (f) as becoming applicable two years after date of first applicability the instant rules.

Section 615.705 establishes the closure requirements applicable to above-ground storage tanks.

Part 615, Subpart L: De-Icing Agent Storage and Handling Units

Subpart L establishes special requirements for affected de-icing agent facilities or units. The Subpart is applicable to all units located wholly or partially within a setback zone. The Subpart does not apply to affected units that are located in a regulated recharge area, unless the unit is also located within a setback zone. For Subpart L to be applicable, the unit also must store or accumulate more than 50,000 pounds of de-icing agent at any one time.

Subpart L is similar to Subparts G, I, and J in that it does not require closure of the affected facilities, but rather specifies design and operating requirements that must be met by the owner or operator. These include the groundwater monitoring requirements and program of Subpart B. Also included are design and operating requirements for indoor and outdoor units.

DISCUSSION OF PART 616

Part 616 sets forth "Standards for New Activities Within a Setback Zone or Regulated Recharge Area" pursuant to the Section 14.4(d) of the Act. Many provisions of Part 616 are identical to provisions of Part 615, and in general, discussion of these will not be repeated here.

Nevertheless, there are some several significant differences between the two Parts, including:

1. Part 616 has no required closure provisions, since facilities of the type that have required closure if governed by Part 615 are statutorily prohibited if governed under Part 616.

2. Each new facility or unit subject to the groundwater monitoring requirements of Part 616 is required to establish background concentrations for contaminants likely to be present at or released from the facility or unit. These background concentrations constitute both triggers and benchmarks for preventive action.

3. Where corrective action must be undertaken, new facilities are required to clean up groundwater to a level consistent with background concentrations, rather than to the level of the groundwater standards.

Part 616, Subpart A: General

Sections 616.101, 616.102, and 616.105 present similar or identical introductory provisions to those found in Part 615. For purposes of economy, the definitions of Section 615.102 are incorporated into Part 616 rather than repeated, except for several definitions that are particular to Part 616.

Part 616 contains no Incorporations by Reference Section. Rather, all references to incorporated material in Part 616 are referenced to the parallel Section at 615.103. The purpose is to have all incorporated-by-reference material cited in Parts 615 and 616 in a single section, thereby allowing for greater economy of listing and for more ready amendment at future times.

Section 616.104 sets out the two methods by which exceptions to the prohibitions against sitings of new facilities may be achieved. Both exception procedures are prescribed in the Act, and hence are statutory provisions. The first method, specified at 616.104(a), is the waiver provision for setback zones of potable water supply wells other than community water supply wells found at Section 14.2(b) of the Act. The second method, specified at 616.104(d), is the provision for the Board's granting of an exception for setback zones for community water supply wells found at Section 14.2(c) of the Act.

Part 616, Subpart B: Groundwater Monitoring Requirements

Subpart B sets out the groundwater monitoring and corrective action requirements applicable to certain new regulated facilities or units. The affected facilities or units are all

the facilities or units subject to Part 616 except for underground storage tanks.

In most of its provisions, Subpart B is modeled after 35 Ill. Adm. Code 724.Subpart F. It thus also closely parallels 615.Subpart B. The principal differences between Parts 615 and 616 concern the preventive response procedures found in Part 616, particularly in Sections 616.207 though 616.211. Most of the material in these latter sections was introduced at 2nd First Notice in response to developments in the Groundwater Standards proceeding, R89-14 (see discussion above).

Section 616.207 sets out requirements for establishing background concentrations and maximum allowable results. The procedure consists of the owner or operator collecting a series of samples intended to represent the background groundwater quality. The sampling must start at or before the beginning of operation of the facility[24], and the parameters that must be sampled are those that are most likely to be represented in any contamination deriving from the facility. Based upon these results the owner or operator calculates summary statistics (mean and standard deviation) and the Maximum Allowable Result ("MAR"), for each parameter. A MAR is the upper limit of the 95% confidence interval set about the sample mean of the background concentrations.

Section 616.208 sets out the sampling procedures that are to be followed after completion of the background sampling phase. Except where a non-compliance response is required, these constitute the normal, continuing sampling requirements.

Section 616.209 sets out a preventive notification and response procedure, as recommended by the Agency (PC #23 at ¶9-10 and at Exhibit 6). The procedure closely parallels that adopted in R89-14 (see discussion above) at 35 Ill. Adm. Code 620.Subpart C.

Depending upon the nature of the contaminant, preventive notification is triggered either by the exceedence of the MAR for any contaminant or the detection of any of a series of special "triggering" contaminants. The contaminants for which detection is the trigger are the contaminants required to be monitored under Section 616.207(a) or that are listed in any of three provisions of Part 620. The latter are the list of preventive

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[24] At 1st First Notice it was proposed that the sampling begin "no later than six months after the beginning of operation of the facility". However, as the Agency pointed out, a new facility should have installed an appropriate monitoring system prior to commencing operations (PC #23, ¶41), and there is therefore no obvious reason why gathering of background levels need be delayed for any period after startup of the facility.

response contaminants found at Section 620.310(a)(3)(A)[25] (except due to natural causes), any contaminant identified as a carcinogen at Section 620.410(b)[26], and any additional contaminant that might be identified as critical pursuant to Section 620.430 (except due to natural causes). A given contaminant may appear on more than one of these lists.

The Defenders recommend that Section 616.209(i) be replaced by a provision that specifies that groundwater contaminants may not exceed a MAR unless the facility obtains an adjusted standard (PC #34 at 3-4). As written, Section 616.209(i) requires that upon completion of a preventive response no contaminant may exceed 50% of the corresponding groundwater standard unless specified conditions are met.

The Defenders' recommendation is apparently based on the assumption that a MAR is likely or necessarily less than 50% of any groundwater standard, and that use of the MAR therefore more closely assures nondegradation of groundwaters. This assumption, however, is unfounded. In many cases MARs are going to be larger than 50% of a groundwater standard, particularly where the numerical value of the standard is small and/or a large standard deviation is associated with the background values.

Thus, it is not possible to conclude generally that Section 616.209(i) either as written or as proposed by the Defenders would be more protective of groundwater. It is reasonable to conclude, however, that Section 616.209(i) as written has greater utility from a legal enforcement standpoint, as the Agency observes (PC #32 at ¶9). In balance, then, the Board believes that Section 616.209(i) has greatest merit as written.

Section 616.210 prescribes the procedure which must be followed where corrective action is necessary. Most of the provisions of this Section are unchanged from 1st First Notice, although they are spelled out in greater detail. Among the differences are a reduction in the rate of required confirmation sampling at Section 616.210(b)(1) for pesticide facilities from monthly to quarterly, based on the Agency's recommendation (PC

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[25] Para-dichlorobenzene, ortho-dichlorobenzene, ethylbenzene, styrene, toluene, xylenes, arsenic, cadmium, chromium, cyanide, lead, mercury, aldicarb, atrazine, carbofuran, endrin, lindane (gamma-hexachlor cyclohexane), 2,4-D, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, methoxychlor, monochlorobenzene, 2,4,5-TP (Silvex), 1,1,1-trichloroethane, and benzene.

[26] Alachlor, benzene, carbon tetrachloride, chlordane, heptachlor, heptachlor epoxide, 1,2-dichloroethane, 1,2-dichloropropane, pentachlorophenol, polychlorinated biphenyls, tetrachloroethylene, toxaphene, trichloroethylene, vinyl chloride.

#23 at Exhibit 6), and requirement that corrective action result in compliance with groundwater standards (proposed subsection (h)(3)) rather than with the level of the MARs; the latter change is also made upon the recommendation of the Agency (PC #23 at Exhibit 6 at 9)

Section 616.211 sets out an alternate non-compliance program similar to that of Section 615.210.

Part 616, Subpart C: General Closure and Post-Closure Requirements

616.Subpart C is identical to 615.Subpart C.

Part 616, Subpart D: On-Site Landfills

Regulations for new on-site landfill units under Part 616 consists of stating at Section 616.402 the statutory prohibitions against the siting of new landfills found at Section 14.2(a), 14.2(d) and 14.3(e) of the Act. Section 616.402 also contains a prohibition not specified in the Act. It is a prohibition, first proposed by the Agency, against new on-site landfilling of special wastes within a regulated recharge area if the distance from the wellhead of the community water supply well to the proposed landfill is less than 2500 feet.

Prior to 2nd First Notice the Agency recommended that all of Section 616.402 be deleted because it is "a restatement of the Act" and "The Act speaks for itself" (PC #23 at ¶44). Nevertheless, the Board retained the section, observing that including reference here to the provisions of the Act is useful for unity of the Part 616 regulations and is of value to persons reading the regulations[27]. Moreover, Section 616.402 does go beyond the Act, and is therefore not a simple restatement.

Prior to 2nd First Notice, Subpart D also contained various design and operating requirements. These were deleted at 2nd First Notice in recognition of comparable regulations at 35 Ill. Adm. Code 810 through 815 (see discussion, Regulation of On-Site Landfills and Waste Piles, above).

Part 616, Subpart E: Land Treatment Units

616.Subpart E is similar to 615.Subpart E except in the provision of Section 616.424, which requires that new land treatment units be designed and operated in accordance with 35 Ill. Adm. Code: Subtitle C and 35 Ill. Adm. Code: Subtitle G.

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[27] The same may be said for similar inclusion at proposed Sections 616.422, 616.442, 616.462, 616.602, 616.622, 616.702, and 616.722.

Section 616.422 contains the Act's statutory prohibition against the siting of new land treatment units which qualify as either a new potential primary source or a new potential secondary source.

Part 616, Subpart F: Surface Impoundments

616.Subpart F is similar in its thrust to 615.Subpart F. However, it does impose additional requirements on new surface impoundments that go beyond those applicable to existing surface impoundments. The principal among these is the requirement that new surface impoundments be constructed containing two liners with a leachate collection system between such liners, found at Section 616.444.

Section 616.442 contains the Act's statutory prohibition against the siting of surface impoundments which qualify as either a new potential primary source or a new potential secondary source.

Part 616, Subpart G: On-Site Waste Piles

616.Subpart G, applicable to new on-site waste piles, is identical to 615.Subpart G applicable to existing waste piles, except for the inclusion in Section 616.462 of the statutory prohibition against new waste piles which are also a new potential primary source or new potential secondary source.

Part 616, Subpart H: Underground Storage Tanks

616.Subpart H applicable to new underground storage tanks is identical to 615.Subpart H applicable to existing underground storage tanks.

Part 616, Subpart I: Pesticide Storage and Handling Units

616.Subpart I is identical to 615.Subpart I, except for the inclusion at Section 616.602 of the statutory prohibition against the siting of a new pesticide storage or handling facility which is also either a new potential primary source or a new potential secondary source.

Part 616, Subpart J: Fertilizer Storage and Handling Units

616.Subpart J is identical to 615.Subpart J, except for the inclusion at Section 616.622 of the statutory prohibition against the siting of a new fertilizer storage or handling facility that is also either a new potential primary source or a new potential secondary source.

Part 616, Subpart K: Road Oil Storage and Handling Units

616.Subpart K is identical to 615.Subpart K, except that the required closure provision of 616.702 is replaced by the statutory prohibition against the siting of a new road oil storage and handling unit that is also either a new potential primary source or a new potential secondary source.

The Agency had recommended that the prohibition against new road oil units in maximum setback zones be associated only with oils that contain wastes (PC #23 at ¶47); the Defenders in turn recommended that the prohibition in maximum setback zones be identical to that in minimum setback zones (PC #24 at 6). At Second Notice the Board noted that it is unpersuaded that there is a basis for distinguishing road oils containing wastes from virgin road oils in the context of the instant regulations.

Part 616, Subpart L: De-Icing Agent Storage and Handling Units

616.Subpart L is similar in thrust to 615.Subpart L. Provisions which differ include the statutory prohibition against the siting of a new de-icing agent storage or handling facility that is also either a new potential primary source or a new potential secondary source.

At 1st First Notice the Board, in accord with the Agency's recommendation, proposed an added prohibition against the siting of any new outdoor storage or handling facility within a regulated recharge area. The Agency later recommended that this provision be deleted, noting that a "new de-icing agent storage facility designed and operated in accordance with standards set forth in Part 616 does not appear to present such significant risk to groundwater that it ought to be prohibited from locating within a regulated recharge area" (PC #23 at ¶48). At 2nd First Notice the Board adopted the Agency's revised recommendation. It should be noted that de-icing agent storage units could still be disallowed in any given regulated recharge area if such prohibition is provided for in the regulatory action that defines the regulated recharge area.

DISCUSSION OF PART 617

Part 617 is intended to be used as the site for regulations delineating regulated recharge areas. Because no regulated recharge areas have been promulgated as of this time, the Part is essentially empty. Nevertheless, it is useful to establish the Part now to reserve the Part for future use and to allow for consistent reference to the body of regulated recharge area regulations within Parts 615 and 616. Among the items that Part 617 will eventually include are the boundaries and effective date of any regulated recharge area, plus any special requirements or exceptions that apply within the regulated recharge area.

ECONOMIC IMPACT

EcIS Document

On March 5, 1991, DENR filed its "Economic Impact Study of Regulations for Activities within Setback Zones and Regulated Recharge Areas (R89-5)"[28]. The EcIS was prepared by Environmental Science & Engineering, Inc. of Peoria, Illinois. This study evaluated the initial and annual compliance costs for regulated facilities and also examined quantitative benefits which arise from avoided corrective action costs and avoided health costs, as well as qualitative benefits such as improved land values, improved aesthetic values, and better protection of the environment.

Compliance Cost Analysis

Information available from Agency well-site surveys was used to estimate the statewide impact of the proposed regulations on existing activities located within minimum setback zones of community water wellheads. As a result of the economic analysis, the proposed regulations are expected to affect 5 existing landfills, 5 land treatment units, 59 surface impoundments, 43 waste piles, 54 underground storage tanks, 54 agrichemical facilities, 5 road oil units, and 27 de-icing agent facilities within minimum setback zones. The investigators calculated the present value of the cost of complying with the proposed regulations for existing facilities to be $36,324,500.

Calculation of the number of affected existing facilities within potential maximum setback zones required an estimation of the number of maximum setback zones which might be established in the future. The investigators chose to base their analysis on two rates, 10% and 50% adoption. These adoption rates were presumed to represent the range of communities which will eventually be expected to impose a maximum setback zone around their water wells. The investigators acknowledged, however, that, "[i]n reality, the actual number may be higher or lower." (Exh. 97 at E-4). These calculations indicated that, with a 10% adoption rate, an additional 2 landfills, 1 land treatment unit, 11 surface impoundments, 3 waste piles, 7 underground storage tanks, 21 agrichemical facilities, and 3 de-icing agent facilities will be affected by Part 615. The compliance costs to these facilities was estimated to be $8,441,800 and $43,261,400 at 10% and 50% maximum setback zone adoption rates, respectively.

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[28] A draft copy of the EcIS was entered at hearing as Exhibit 89. A final report version, under the same title, has subsequently been filed. The final report version is hereby entered into the record as Exhibit 97.

A similar tack was taken to estimate the affected existing facilities in potential regulated recharge areas. The EcIS investigators reported that "IEPA believes that regulated recharge areas will probably go 'hand-in-hand' with maximum setback zones" (Exh. 97 at E-4) and thus, used 10% and 50% adoption rates for determining the number of affected facilities. Agency well-site surveys generally identify facilities within 1000 feet of the wellhead. But because regulated recharge areas may encompass an area up to 2500 feet from the wellhead, the investigators made a linear extrapolation of the number of facilities between 1000 and 2500 feet by multiplying the number of facilities inside a 1000 foot setback by 2.5 and then subtracting the number of facilities within the 1000 foot zone. Using these methods, an additional 4 landfills, 2 land treatment units, 26 surface impoundments, 11 waste piles, 19 underground storage tanks, 40 agrichemical facilities, 1 road oil units and 8 de-icing facilities were "identified", assuming a 10% adoption rate. The costs of compliance are estimated to be $13,305,600 and $65,963,000 at 10% and 50% regulated recharge area adoption rates, respectively.

Benefits Analysis

The affect of the proposed regulations, and, indeed, the intent of the IGPA is to reduce the likelihood of spills and leaks that cause groundwater contamination. As the EcIS investigators note:

> "Tracing [groundwater] contamination to a source is often difficult and expensive, especially if significant amounts of time have passed since the contamination event occurred. Contaminated groundwater pumped from non-community and private wells can be consumed for long periods of time without realizing the danger, since typical laboratory analysis of potable water seeks only to detect coliform bacteria and possibly nitrates. Without the proposed regulations, the burden of the cost of remediating contaminated groundwater falls upon private well owners, communities, and the State of Illinois." (Exh. 97 at E-6)

The principal benefits of the proposed regulations are, according to the EcIS, the avoided occurrences of contamination, the avoided costs of groundwater corrective action, the avoided costs of securing uncontaminated drinking water, and the avoided costs of health care resulting from the ingestion of contaminated water. Additional benefits include improved land values, improved aesthetic values, and better protection of the environment.

The investigators also point out that, under other regulations, some facility owners are responsible for the cost of corrective action. Under the proposed rules, however, financial

assurance is not required[29]. If financial assurance were included in these rules, communities and individuals would have the assurance that a facility could pay the cost of corrective action in the event of contamination.

To develop avoided costs, the EcIS used case history accidents, recorded groundwater contamination, and "real world" corrective action costs in a series of contamination event scenarios. The investigators estimated corrective action costs for a contamination event detected at an unregulated facility versus that of a facility subject to the proposed rules. The major differences in costs of remediation result from more expedient detection of contamination. Early response facilitates identification of the source and often limits the extent and magnitude of the contamination.

For each contamination scenario, the investigators presented several corrective action options and then chose the cost-effective alternative, much as would happen in an actual corrective action. Thus, the avoided costs derived from these contamination scenarios are representative of actual (and therefore, average) corrective action decisions, rather than of worst-case conditions.

To estimate the frequency of past groundwater contamination events and the likelihood of future contamination events, the analysis used agrichemical contamination of community water supplies. The analysis assumed that such contamination may occur at other sites at a frequency similar to that estimated for agrichemical facilities. The estimation was based on the number of community water wells that are presently contaminated by agrichemicals following approximately 30 years of agrichemical use. Based on this methodology, the investigators estimated that one agrichemical contamination event occurs within a potential setback zone in Illinois every 1.39 years.

The investigators determined that surface impoundments, agrichemical facilities and landfills make up approximately 80% of the affected facilities. Using these numbers, the expected contamination rate, and the avoided cost values for each scenario, the total avoided cost benefit is expected to be $1,285,000. The 95% upper limit on this benefit value increases the expected benefits to $4,097,900. The 95% upper limit was presented to provide an example of maximum quantifiable benefits.

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[29] The Board notes that financial assurance is now required for landfills and waste piles, through the operation of 35 Ill. Adm. Code 811 through 815. This was not the case at the time the EcIS was being prepared.

Cost and Benefits Comparison

The investigators presented a cost and benefits comparison for surface impoundments, agrichemical facilities, and landfills within minimum setback zones. Fifty-nine surface impoundments were estimated to be affected at a compliance cost of $338,900 per facility versus an avoided cost benefit of $10,200. Fifty-four agrichemical facilities would be required to pay $112,600 each for compliance with Part 615 versus $11,800 avoided cost benefit per facility. Five landfills were identified as affected by $796,000 compliance cost per facility compared to $8,400 avoided cost benefit. Total compliance costs for these 118 facilities were estimated by the EcIS at $30,056,000 while total avoided cost benefits were expected to be $1,285,000.

Even though the estimated costs outweigh the estimated avoided cost benefit nearly 30 to 1, the EcIS states that this discrepancy, "must be weighed against the benefits which are not quantifiable, such as improved aesthetic values, better protection of the environment, improved land values, avoidance of latent or unknown health impacts (occurring beyond the 20-year scope of this study), and other currently unknown benefits." (Exh. 97 E-11).

Comments on the EcIS

Some participants at the April 3, 1991 hearing and subsequent public comments indicated that the EcIS underestimated the benefits of the proposed rule. (Ex. 94; PC #23 and #24) IFCA testified that the EcIS underestimated costs to agrichemical facilities. Points of controversy in the calculation of economic costs include:

1) The investigators' use of the frequency of agrichemical contamination instead of other types of contamination to determine the likelihood of future contamination events. The Agency asserted in Exhibit 94 that the EcIS methodology incorrectly estimates the number of contamination events from agricultural chemical facilities and also incorrectly estimates the number of contamination events from other types of activities. The Agency states that, "it must be kept in mind that agricultural chemical facilities differ functionally from surface impoundments, landfills, and waste piles. At agricultural chemical facilities, contaminants are not generally placed on or under the ground yet that is precisely what occurs at surface impoundments, landfills, and waste piles. For this reason, it is reasonable to expect that surface impoundments, landfills, and waste piles may have more contamination incidents than agricultural chemical facilities." (Ex. 94 at 11-12.)

2) The use of the Agency's 267 well-site surveys as the sole data set on which to base the number of affected facilities and subsequent compliance costs. Several parties asked if the investigators had requested an additional, confirming data from the IEPA or other agencies. The EcIS investigators indicated that they used only the well-site surveys. (For example, see R2. at 20-21).

3) Several questions were asked about the applicability of the rules to the facilities determined in the EcIS to be affected. The investigators defended their inclusion of municipal water treatment and wastewater lagoons as on-site facilities which contain special waste (defined as, among other things, pollution control waste). The Agency challenged this assumption. (R2. at 27; Ex. 94 at 3). The Agency also questioned the inclusion in the EcIS of 5 landfills as affected facilities. The Agency contends that these are, "landfills that contain special waste or other waste generated off-site. . .such landfills are not subject to 35 Illinois Administrative Code 615. Accordingly the EcIS should not attribute any costs under 35 Illinois Administrative Code 615 to these landfills." (Ex. 94 at 3; emphasis in original).

4) IFCA testified that the costs of compliance with 8 Illinois Administrative Code 255 should be included in the cost analysis of Parts 615 and 616. (Ex. 96, PC #20).

Discussion

The Board is charged under the Act to take into account the technical feasibility and economic reasonableness of all regulatory proposals before it (Act at Section 27(a); See also, Granite City Div. National Steel, et al. v. PCB, ____ Ill. App. 3d _____ (5th Dist. 1991)). Compliance can be achieved with existing technology. Therefore the substantive issue before the Board is solely whether implementation of the rule is economically reasonable.

The Board recognizes the difficulty in applying an economic analysis to a rule of general applicability, and particularly one which has many self-implementing provisions. It does appear, however, that in calculating quantifiable costs and benefits, the EcIS investigators have used a limited data set and, perhaps, some misplaced assumptions to make their calculations. The EcIS investigators stated that determination of the weight of non-quantifiable benefits is a decision of the Board (R2. at 86). It is indeed inescapable that the benefits of these rules extend beyond the quantifiable cost avoidances and significantly

contribute to the protection of nearly all Illinois groundwater drinking water resources.

The Board has considered the information in the record pertaining to the economic reasonableness of these rules, including comments, testimony, exhibits, and the EcIS document. From the record it is reasonable to conclude that implementation of these regulations will have costs ranging in the hundreds of thousands. Expected benefits include greater protection of groundwater resources, and the resultant benefit to human health through reduced presence of contaminants in drinking water resources. Given this balance, the Board concludes that the instant rule will not be economically unreasonable. The Board does recognize that there may be individual cases where the economic burden is abnormally heavy and reminds such parties of the adjusted standard process before the Board (pursuant to Title VII of the Act) and, in some cases, the certification of minimal hazard through the Agency (pursuant to Section 14.5 of the Act).

ORDER

The Clerk of the Board is directed to submit the text of the following amendments to the Secretary of State for final notice pursuant to Section 6 of the Illinois Administrative Procedures Act.

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

PART 601
INTRODUCTION

Section
601.101 General Requirements
601.102 Applicability
601.103 Severability
601.104 Analytical Testing
601.105 Definitions

APPENDIX A References to Former Rules

AUTHORITY: Implementing Section 17 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989~~1987~~, ch. 111 1/2, pars. 1017 and 1027).

SOURCE: Filed with Secretary of State January 1, 1978; amended at 2 Ill. Reg. 36, p. 72, effective August 29, 1978; amended at 3 Ill. Reg. 13, p. 236, effective March 30, 1979; amended and codified at 6 Ill. Reg. 11497, effective September 14, 1982; amended at 6 Ill. Reg. 14344, effective November 3, 1982; amended in R84-12 at 14 Ill. Reg. 1379, effective January 8, 1990; amended in R89-5 at ____ Ill. Reg. _____, effective _____.

NOTE: Capitalization denotes statutory language

Section 601.105 Definitions

For purposes of this Chapter:

"Act" means the Environmental Protection Act, as amended, (Ill. Rev. Stat. 1989~~1987~~, ch. 111 1/2, pars. 1001 et seq.).

"Agency" means the Illinois Environmental Protection Agency.

"Board" means the Illinois Pollution Control Board.

"Boil Order" means a notice to boil all drinking and culinary water for at least five minutes before use, issued by the proper authorities to the consumers of a public water supply affected, whenever the water being supplied may have become bacteriologically contaminated.

"Certified Laboratory" means any laboratory approved by the Agency or the Illinois Department of Public Health

for the specific parameters to be examined, as set out in rules adopted pursuant to the Illinois Administrative Procedure Act, (Ill. Rev. Stat. 1989, ch. 127, pars. 1001 et seq.).

"Chemical Analysis" means analysis for any inorganic or organic substance, with the exception of radiological or microbiological analyses.

"Confined Geologic Formations" are geologic water bearing formations protected against the entrance of contamination by other geologic formations.

"Disinfectant" means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone, added to water in any part of the treatment or distribution process, which is intended to kill or inactivate pathogenic microorganisms.

"Dose Equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

"Gross Alpha Particle Activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

"Gross Beta Particle Activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

~~Ground Water means all natural or artificially introduced waters found below the ground surface, including water from dug, drilled, bored or driven wells, infiltration lines, and springs~~. "GROUNDWATER" MEANS UNDERGROUND WATER WHICH OCCURS WITHIN THE SATURATED ZONE AND GEOLOGIC MATERIALS WHERE THE FLUID PRESSURE IN THE PORE SPACE IS EQUAL TO OR GREATER THAN ATMOSPHERIC PRESSURE. (Section 3.64 of the Act)

"Halogen" means one of the chemical elements chlorine, bromine or iodine.

"Man-Made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, National Bureau of Standards (NBS) Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.

"Maximum Residence Time Concentration (MRTC)" means the concentration of total trihalomethanes found in a water sample taken at a point of maximum residence time in the public water supply system.

"Maximum Total Trihalomethane Potential (MTP)" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25°C or above.

"Official Custodian" means any officer of an organization which is the owner or operator of a public water supply, and who has direct administrative responsibility for the supply.

"Persistent Contamination" exists when analysis for total coliform is positive in one or more samples of a routine sample set, and when three or more subsequent check samples indicate the presence of contamination.

"Picocurie (pCi)" means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

"Point of Maximum Residence Time" means that part of the active portion of the distribution system remote from the treatment plant where the water has been in the distribution system for the longest period of time.

"Recurring Contamination" exists when analysis of total coliform is positive in one or more samples of a routine sample set, if this occurs four or more times in a calendar year.

"Rem" means 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.

"Re-sell Water" means to deliver or provide potable water, obtained from a public water supply subject to these regulations, to the consumer, who is then individually or specifically billed for water service, or where any monetary assessment is levied or required and specifically used for water service. Water supply facilities owned or operated by political subdivisions, homeowners associations, and not-for-profit associations, as well as privately owned utilities regulated by the Illinois Commerce Commission, are considered to sell water whether or not a charge is specifically made for water.

"Service Connection" is the opening, including all fittings and appurtenances, at the water main through which water is supplied to the user.

"Supply" means a public water supply.

"Surface Water" means all tributary streams and drainage basins, including natural lakes and artificial reservoirs, which may affect a specific water supply above the point of water supply intake.

"Surface Water Supply Source" means any surface water used as a water source for a public water supply.

"Total Trihalomethanes (TTHM)" means the sum of the concentration in milligrams per liter of the trihalomethane compounds trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform), rounded to two significant figures.

"Trihalomethane (THM)" means one of the family of organic compounds named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

"Water Main" means any pipe for the purpose of distributing potable water which serves or is accessible to more than one property, dwelling, or rental unit, and is exterior to buildings.

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

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

PART 615
EXISTING ACTIVITIES IN A SETBACK ZONE OR REGULATED RECHARGE AREA

SUBPART A: GENERAL

Section

SUBPART B: GROUNDWATER MONITORING REQUIREMENTS

Section

SUBPART C: GENERAL CLOSURE AND POST-CLOSURE REQUIREMENTS

Section

SUBPART D: ON-SITE LANDFILLS

Section

SUBPART E: ON-SITE LAND TREATMENT UNITS

SUBPART F: ON-SITE SURFACE IMPOUNDMENTS

SUBPART G: ON-SITE WASTE PILES

SUBPART H: UNDERGROUND STORAGE TANKS

SUBPART I: PESTICIDE STORAGE AND HANDLING UNITS

SUBPART J: FERTILIZER STORAGE AND HANDLING UNITS

SUBPART K: ROAD OIL STORAGE AND HANDLING UNITS

SUBPART L: DE-ICING AGENT STORAGE AND HANDLING UNITS

AUTHORITY: Implementing and authorized by Sections 5, 14.4, 21, 22, and 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1005, 1014.4, 1021, 1022, and 1027).

SOURCE: Adopted in R89-5 at ____ Ill. Reg. _____, effective _____.

NOTE: CAPITALIZATION DENOTES STATUTORY LANGUAGE.

SUBPART A: GENERAL

Section 615.101 Purpose

This Part prescribes requirements and standards for the protection of groundwater for certain types of existing facilities or units located wholly or partially within a setback zone regulated by the Act or within a regulated recharge area as delineated pursuant to Section 17.4 of the Act.

Section 615.102 Definitions

Except as stated in this Section, and unless a different meaning of a word or term is clear from the context, the definitions of words or terms in this Part shall be the same as those used in the Act or the Illinois Groundwater Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 7451 et seq.):

"Above-ground storage tank" means a storage tank that is not an underground storage tank.

"Act" means the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1001 et seq.).

"Agency" means the Illinois Environmental Protection Agency.

"Board" means the Illinois Pollution Control Board.

"Certification" means a statement of professional opinion based upon knowledge and belief.

"COMMUNITY WATER SUPPLY" MEANS A PUBLIC SUPPLY WHICH SERVES OR IS INTENDED TO SERVE AT LEAST 15 SERVICE CONNECTIONS USED BY RESIDENTS OR REGULARLY SERVES AT LEAST 25 RESIDENTS. (Section 3.05 of the Act)

"Compliance point" means any point in groundwater designated at 35 Ill. Adm. Code 620.Subpart B as a Class I through III groundwater at which a contaminant released from the unit could pass underneath the unit boundary. There may be more than one compliance point for a particular unit.

"Commencement of construction" means that ALL NECESSARY FEDERAL, STATE, AND LOCAL APPROVALS HAVE BEEN OBTAINED, AND WORK AT THE SITE HAS BEEN INITIATED AND PROCEEDS IN A REASONABLY CONTINUOUS MANNER TO COMPLETION. (Section 3.58 of the Act)

"Container" means any portable device (including, but not limited to, 55 gallon drums) in which material is stored, treated, disposed of or otherwise handled. The term "container" does not include a vehicle used to transport material.

"Containerized" means being in a container.

"CONTAMINANT" IS ANY SOLID, LIQUID, OR GASEOUS MATTER, ANY ODOR, OR ANY FORM OF ENERGY, FROM WHATEVER SOURCE. (Section 3.06 of the Act)

"CONTAMINATION" OR "CONTAMINATE", WHEN USED IN CONNECTION WITH GROUNDWATER, MEANS WATER POLLUTION OF SUCH GROUNDWATER. (Section 3.63 of the Act)

"Date of first applicability" means the effective date of this Part for any unit located within a minimum setback zone, except that:

> If a unit is first incorporated into any setback zone by an ordinance or regulation that establishes a maximum setback zone, the date of first applicability is the effective date of this Part or the effective date of the ordinance or regulation that establishes the maximum setback zone, whichever is later; or

If a unit is located in a part of a regulated recharge area that was not previously part of a setback zone, the date of first applicability is the effective date of the regulation that establishes the regulated recharge area.

"De-Icing agent" means a chemical used for de-icing, including but not limited to sodium chloride and calcium chloride. Sand, ashes, or other abrasive materials that do not alter the freezing point of water are not de-icing agents.

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

"Method Detection Limit" or "MDL", which means the minimum concentration of a substance that can be measured as reported with 99 percent confidence that the true value is greater than zero pursuant to 56 Fed. Reg. 3526-3597; incorporated by reference at Section 615.103; or

"Method Quantitation Limit" or "MQL", which means the minimum concentration of a substance that can be measured and reported pursuant to "Test Methods for Evaluating Solid Wastes, Physical/ Chemical Methods", incorporated by reference at Section 615.103.

"Dike" means an embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

"Discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of any material onto or on any land or water.

"DISPOSAL" MEANS THE DISCHARGE, DEPOSIT, INJECTION, DUMPING, SPILLAGE, LEAKING OR PLACING OF ANY WASTE OR HAZARDOUS WASTE INTO OR ON ANY LAND OR WATER OR INTO ANY WELL SO THAT SUCH WASTE OR HAZARDOUS WASTE OR ANY CONSTITUENT THEREOF MAY ENTER THE ENVIRONMENT OR BE EMITTED INTO THE AIR OR DISCHARGED INTO ANY WATERS, INCLUDING GROUNDWATERS. (Section 3.08 of the Act)

"Existing unit" means a unit that was in operation or for which there is commencement of construction on or before the date of first applicability, except that a unit is not an existing unit if the unit:

Expands laterally beyond the currently permitted boundary, or the unit boundary if the unit is not permitted, in existence after the date of first applicability; or

Is part of a facility that undergoes major reconstruction after the date of first applicability; or

Reopens at any time after having submitted a certification of closure to the Agency.

"Facility" means all contiguous land and structures, other appurtenances and improvements on the land used for the treating, storing, handling, or disposal of any material which causes that unit to be regulated under this Part. A facility may consist of one or more units.

"Freeboard" means the vertical distance between the top of a tank or dike and the surface of the material contained therein.

"Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication No. SW-846), incorporated by reference at Section 615.103.

"GROUNDWATER" MEANS UNDERGROUND WATER WHICH OCCURS WITHIN THE SATURATED ZONE AND GEOLOGIC MATERIALS WHERE THE FLUID PRESSURE IN THE PORE SPACE IS EQUAL TO OR GREATER THAN ATMOSPHERIC PRESSURE. (Section 3.64 of the Act)

"Groundwater standards" means the water quality standards for groundwater adopted by the Board under Section 8 of the Illinois Groundwater Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, par. 7458) and found at 35 Ill. Adm. Code 620.

"HAZARDOUS WASTE" MEANS A WASTE, OR COMBINATION OF WASTES, WHICH BECAUSE OF ITS QUANTITY, CONCENTRATION, OR PHYSICAL, CHEMICAL, OR INFECTIOUS CHARACTERISTICS MAY CAUSE OR SIGNIFICANTLY CONTRIBUTE TO AN INCREASE IN MORTALITY OR AN INCREASE IN SERIOUS, IRREVERSIBLE, OR INCAPACITATING REVERSIBLE, ILLNESS; OR POSE A SUBSTANTIAL PRESENT OR POTENTIAL HAZARD TO HUMAN HEALTH OR THE ENVIRONMENT WHEN IMPROPERLY TREATED, STORED,

TRANSPORTED, OR DISPOSED OF, OR OTHERWISE MANAGED, AND WHICH HAS BEEN IDENTIFIED, BY CHARACTERISTICS OR LISTING, AS HAZARDOUS PURSUANT 35 Ill. Adm. Code 721. (Section 3.15 of the Act)

"Incompatible material" means a material which may:

Cause corrosion or decay of containment materials (e.g., container inner liners or tank walls); or

When commingled with another material, produces heat or pressure, fire, explosion, violent reaction, toxic dusts, mists, fumes or gases, or flammable fumes or gases.

"Landfill" means a unit or part of a facility in or on which waste is placed and accumulated over time for disposal, and which is not a land application unit, a surface impoundment or an underground injection well.

"LANDSCAPE WASTE" MEANS ALL ACCUMULATIONS OF GRASS OR SHRUBBERY CUTTINGS, LEAVES, TREE LIMBS AND OTHER MATERIALS ACCUMULATED AS THE RESULT OF THE CARE OF LAWNS, SHRUBBERY, VINES AND TREES. (Section 3.20 of the Act)

"Land application unit" means an area where wastes are agronomically spread over or disked into land or otherwise applied so as to become incorporated into the soil surface.

"Land treatment" means the application of waste onto or incorporation of waste into the soil surface. For the purposes of this Part a land application unit is a land treatment unit.

"Leachate" means any liquid, including suspended components in the liquid, that has percolated through or drained from a material.

"Licensed water well contractor" means a person licensed under the Water Well and Pump Installation Contractor's License Act (Ill. Rev. Stat. 1989, ch. 111, pars. 7101 et seq.).

"Liner" means a continuous layer of natural or manmade materials beneath or on the side of a surface impoundment, landfill, landfill cell, waste pile, or storage pile which restricts the downward or lateral escape of waste, waste constituents, leachate or stored materials.

"Major reconstruction" means commencement of construction at a facility where the fixed capital cost of the new components constructed within a 2-year period exceeds 50% of the fixed capital cost of a comparable entirely new facility. New components do not include any new components necessary for compliance with this Part.

"New unit" means a unit that is not an existing unit.

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

"Non-special waste" means a waste that is not a special waste.

"Off-site" means not on-site.

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

"Operator" means the person responsible for the operation of a site, facility or unit.

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

"PESTICIDE" MEANS ANY SUBSTANCE OR MIXTURE OF SUBSTANCES INTENDED FOR PREVENTING, DESTROYING, REPELLING, OR MITIGATING ANY PEST OR ANY SUBSTANCE OR MIXTURE OF SUBSTANCES INTENDED FOR USE AS A PLANT REGULATOR, DEFOLIANT OR DESICCANT. (Section 3.71 of the Act)

"Pile" means any noncontainerized accumulation of solid, non-flowing material that is used for treatment, storage or disposal.

"POTABLE" MEANS GENERALLY FIT FOR HUMAN CONSUMPTION IN ACCORDANCE WITH ACCEPTED WATER SUPPLY PRINCIPLES AND PRACTICES. (Section 3.65 of the Act)

"Practical Quantitation Limit" or "PQL" means the lowest concentration or level that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, incorporated by reference at Section 615.103.

"PUBLIC WATER SUPPLY" MEANS ALL MAINS, PIPES AND STRUCTURES THROUGH WHICH WATER IS OBTAINED AND DISTRIBUTED TO THE PUBLIC, INCLUDING WELLS AND WELL STRUCTURES, INTAKES AND CRIBS, PUMPING STATIONS, TREATMENT PLANTS, RESERVOIRS, STORAGE TANKS AND APPURTENANCES, COLLECTIVELY OR SEVERALLY, ACTUALLY USED OR INTENDED FOR USE FOR THE PURPOSE OF FURNISHING WATER FOR DRINKING OR GENERAL DOMESTIC USE AND WHICH SERVE AT LEAST 15 SERVICE CONNECTIONS OR WHICH REGULARLY SERVE AT LEAST 25 PERSONS AT LEAST 60 DAYS PER YEAR. A PUBLIC WATER SUPPLY IS EITHER A "COMMUNITY WATER SUPPLY" OR A "NON-COMMUNITY WATER SUPPLY". (Section 3.28 of the Act)

"Reactive material" means a material which meets one or more of the following criteria:

It is normally unstable and readily undergoes violent change without detonating;

It reacts violently with water;

It forms potentially explosive mixtures with water;

When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment;

It is capable of detonation or explosive reaction if it is subject to a strong initiating source, or if heated under confinement;

It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or

It is a forbidden explosive as defined in 49 CFR 173 incorporated by reference at Section 615.103, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

"Registered land surveyor" means a person registered under the Illinois Land Surveyors Act (Ill. Rev. Stat. 1989, ch. 111, pars. 3201 et seq.).

"Registered professional engineer" means a person registered under the Illinois Professional Engineering Act (Ill. Rev. Stat. 1989, ch. 111, par. 5101 et seq.).

"REGULATED RECHARGE AREA" MEANS A COMPACT GEOGRAPHIC AREA, AS DETERMINED BY THE BOARD pursuant to Section 17.4 of the Act, THE GEOLOGY OF WHICH RENDERS A POTABLE RESOURCE GROUNDWATER PARTICULARLY SUSCEPTIBLE TO CONTAMINATION. (Section 3.67 of the Act)

"Road oil" means slow-curing asphaltic oils which show no separation on standing and which are used for road construction, maintenance or repair.

"Runoff" means any rainwater, leachate or other liquid that drains over land from any part of a facility.

"Run-on" means any rainwater, leachate or other liquid that drains over land onto any part of a facility.

"Secondary containment structure" means any structure or basin intended to contain spills and prevent runoff or leaching from piles, containers, or tanks and related piping.

"SETBACK ZONE" MEANS A GEOGRAPHIC AREA, DESIGNATED PURSUANT TO THIS ACT, CONTAINING A POTABLE WATER SUPPLY WELL OR A POTENTIAL SOURCE OR POTENTIAL ROUTE HAVING A CONTINUOUS BOUNDARY, AND WITHIN WHICH CERTAIN PROHIBITIONS OR REGULATIONS ARE APPLICABLE IN ORDER TO PROTECT GROUNDWATERS. (Section 3.61 of the Act)

"SITE" MEANS ANY LOCATION, PLACE, TRACT OF LAND, AND FACILITIES, INCLUDING BUT NOT LIMITED TO BUILDINGS, AND IMPROVEMENTS USED FOR PURPOSES SUBJECT TO REGULATION OR CONTROL BY THIS ACT OR REGULATIONS THEREUNDER. (Section 3.43 of the Act)

"SLUDGE" MEANS ANY SOLID, SEMI-SOLID, OR LIQUID WASTE GENERATED FROM A MUNICIPAL, COMMERCIAL, OR INDUSTRIAL WASTEWATER TREATMENT PLANT, WATER SUPPLY TREATMENT PLANT, OR AIR POLLUTION CONTROL FACILITY OR ANY OTHER SUCH WASTE HAVING SIMILAR CHARACTERISTICS AND EFFECTS. (Section 3.44 of the Act)

"SPECIAL WASTE" MEANS ANY INDUSTRIAL PROCESS WASTE, POLLUTION CONTROL WASTE OR HAZARDOUS WASTE, EXCEPT AS DETERMINED PURSUANT TO SECTION 22.9 OF the Act and 35 Ill. Adm. Code 808. (Section 3.45 of the Act)

"STORAGE" means the holding or containment of a material, either on a temporary basis or for a period of years, in such manner as not to constitute disposal of such material.

"Surface impoundment" means a natural topographical depression, man-made excavation, or diked area that is designed to hold liquid wastes or wastes containing free liquids.

"Surface water" means all waters that are open to the atmosphere.

"Tank" means a stationary device, designed to contain an accumulation of material which is constructed of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. The term "tank" does not include areas used to accumulate materials prior to pumping to tanks or containers (i.e., sump pits) or associated piping. The term "tank" does not include vehicles used to transport material.

"Treatment" means any method, technique or process, including neutralization, designed to change the physical, chemical or biological character or composition of any material so as to neutralize such material, or so as to recover energy or material resources from the material or so as to render such material nonhazardous or less hazardous, safer to transport, store or dispose of, or amenable for recovery, amenable for storage or reduced in volume.

"Underground storage tank" means a storage tank as defined at 35 Ill. Adm. Code 731.101(f).

"UNIT" MEANS ANY DEVICE, MECHANISM, EQUIPMENT, OR AREA (EXCLUSIVE OF LAND UTILIZED ONLY FOR AGRICULTURAL PRODUCTION). (Section 3.62 of the Act)

"Unit boundary" means a line at the land's surface circumscribing the area on which, above which or below which waste, pesticides, fertilizers, road oils or de-icing agents will be placed during the active life of the facility. The space taken up by any liner, dike or other barrier designed to contain waste, pesticides, fertilizers, road oils or de-icing agents falls within the unit boundary.

"WASTE" MEANS ANY CARBAGE, SLUDGE FROM A WASTE TREATMENT PLANT, WATER SUPPLY TREATMENT PLANT, OR AIR POLLUTION CONTROL FACILITY OR OTHER DISCARDED MATERIAL,

INCLUDING SOLID, LIQUID, SEMI-SOLID, OR CONTAINED GASEOUS MATERIAL RESULTING FROM INDUSTRIAL, COMMERCIAL, MINING AND AGRICULTURAL OPERATIONS, AND FROM COMMUNITY ACTIVITIES, BUT DOES NOT INCLUDE:

INDUSTRIAL DISCHARGES WITH NPDES PERMITS ISSUED PURSUANT TO 35 ILL. ADM. CODE 309;

SOURCE, SPENT NUCLEAR, OR BY-PRODUCT MATERIALS AS DEFINED BY THE ATOMIC ENERGY ACT OF 1954 (42 U.S.C. 2014);

ANY SOLID OR DISSOLVED MATERIAL FROM ANY MATERIAL SUBJECT TO 62 ILL. ADM. CODE 1700 THROUGH 1850. (Section 3.53 of the Act)

"Waste pile" means a pile consisting of waste that has a total volume greater than 10 cubic yards or within which the waste remains for more than 90 days.

"WATERS" MEANS ALL ACCUMULATIONS OF WATER, SURFACE AND UNDERGROUND, NATURAL AND ARTIFICIAL, PUBLIC AND PRIVATE, OR PARTS THEREOF, WHICH ARE WHOLLY OR PARTLY WITHIN, FLOW THROUGH, OR BORDER UPON THIS STATE. (Section 3.56 of the Act)

"WELL" MEANS A BORED, DRILLED OR DRIVEN SHAFT, OR DUG HOLE, THE DEPTH OF WHICH IS GREATER THAN THE LARGEST SURFACE DIMENSION. (Section 3.57 of the Act)

Section 615.103 Incorporations by Reference

a) The Board incorporates the following material by reference:

GPO. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20401, (202) 783-3238:

National Primary Drinking Water Regulations, Final Rule, 56 Fed. Reg. 3526-3597 (January 30, 1991).

Shippers-General Requirements for Shipments and Packagings, 49 CFR 173 (1990).

NTIS. National Technical Information Service, 5285 Port Royal Road, Springfield VA 22161, (703) 487-4600.

"Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 (Third Edition, 1986, as amended

by Revision I (December 1987), Doc. No. PB 89-148076).

b) This Section incorporates no later amendments or editions.

Section 615.104 Prohibitions

No person shall cause or allow the construction or operation of any facility or unit in violation of the Act or regulations adopted by the Board thereunder, including but not limited to this Part.

Section 615.105 General Exceptions

a) This Part does not apply to any facility or unit, or to the owner or operator of any facility or unit:

1) For which the owner or operator obtains certification of minimal hazard pursuant to Section 14.5 of the Act; or

2) For which alternate requirements are imposed in an adjusted standard proceeding or as part of a site-specific rulemaking, pursuant to Title VII of the Act; or

3) For which alternate requirements are imposed in a regulated recharge area proceeding pursuant to Section 17.4 of the Act; or

4) That is LOCATED ON THE SAME SITE AS A NON-COMMUNITY WATER SYSTEM WELL AND FOR WHICH THE OWNER IS THE SAME FOR BOTH THE facility or unit AND THE WELL. (Section 14.4(b) of the Act); or

5) That is located WITHIN A REGULATED RECHARGE AREA AS DELINEATED in 35 Ill. Adm. Code 617, PROVIDED THAT:

A) THE BOUNDARY OF THE LATERAL AREA OF INFLUENCE OF A COMMUNITY WATER SUPPLY WELL LOCATED WITHIN THE REGULATED RECHARGE AREA does not INCLUDE SUCH facility or unit THEREIN;

B) THE DISTANCE FROM THE WELLHEAD OF THE COMMUNITY WATER SUPPLY TO THE facility or unit EXCEEDS 2500 FEET; AND

C) THE COMMUNITY WATER SUPPLY WELL WAS not IN EXISTENCE PRIOR TO JANUARY 1, 1988.

(Section 14.4(b) of the Act).

b) Nothing in this Section shall limit the authority of the Board to impose requirements on any facility or unit within any portion of any setback zone or regulated recharge area pursuant to the Act.

SUBPART B: GROUNDWATER MONITORING REQUIREMENTS

Section 615.201 Applicability

This Subpart applies to:

a) Surface impoundments subject to Subpart F;

b) Pesticide storage and handling units subject to Subpart I;

c) Fertilizer storage and handling units subject to Subpart J;

d) Road oil storage and handling units subject to Subpart K; and

e) De-icing agent storage and handling units subject to Subpart L.

Section 615.202 Compliance Period

The compliance period is the active life of the unit, including closure and post-closure care periods.

a) The active life begins when the unit first begins operation or one year after the date of first applicability, whichever occurs later, and ends when the post-closure care period ends.

b) The post-closure care period for units other than pesticide storage and handling units subject to Subpart I and fertilizer storage and handling units subject to Subpart J is five years after closure, except as provided at Section 615.211(e).

c) The post-closure care period for pesticide storage and handling units subject to Subpart I and for fertilizer storage and handling units subject to Subpart J is three years after closure, except as provided at Section 615.211(e).

d) Subsections (a), (b) and (c) notwithstanding, no post-closure care period is required if all waste, waste residues, contaminated containment system components and contaminated subsoils are removed or decontaminated at closure, and no ongoing corrective action is required pursuant to Section 615.211.

Section 615.203 Compliance with Groundwater Standards

The owner or operator shall comply with the groundwater standards.

a) The term of compliance is the compliance period.

b) Compliance shall be measured at the compliance point, or compliance points if more than one such point exists.

Section 615.204 Groundwater Monitoring System

a) Except as provided otherwise in subsection (b), the groundwater monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield groundwater samples, that:

1) Represent the quality of background water that has not been affected by contamination from the facility or unit; and

2) Represent the quality of groundwater at the compliance point or points.

b) If a potable water well or other water well can be used as a monitoring well pursuant to this subsection, no additional monitoring wells are required under this Section. A potable water well or other water well may be used as a monitoring well if:

1) For a potable water well other than a community water supply well, a construction report has been filed with the Illinois Department of Public Health for such well, or such well has been located and constructed (or reconstructed) to meet the Illinois Water Well Construction Code (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 116.111 et seq.) and 35 Ill. Adm. Code 920;

2) For a water well other than a potable water well (e.g., a livestock watering well or an irrigation well), the owner or operator of the unit seeking to use the well as a monitoring well certifies to the Agency that a construction report has been filed with the Illinois Department of Public Health or the Illinois Department of Mines and Minerals for such well, or that such well has been located and constructed (or reconstructed) to meet the Illinois Water Well Construction Code (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 116.111 et seq.) and 35 Ill. Adm. Code 920; and

3) The unit contains solely non-special waste if the unit is a surface impoundment.

c) If a facility contains more than one unit, separate groundwater monitoring systems are not required for each unit, provided that provisions for sampling the groundwater will enable detection and measurement of contaminants that have entered the groundwater from all units.

d) All monitoring wells must meet the following requirements:

1) Construction must be done in a manner that will enable the collection of groundwater samples;

2) Casings and screens must be made from durable material that is resistant to expected chemical or physical degradation and that does not interfere with the quality of groundwater samples being collected; and

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

Section 615.205 Groundwater Monitoring Program

The owner or operator shall develop a groundwater monitoring program that consists of:

a) Consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of groundwater quality below the unit. At a minimum the program must include procedures and techniques for:

1) Sample collection;

2) Sample preservation and shipment;

3) Analytical procedures; and

4) Chain of custody control.

b) Sampling and analytical methods that are appropriate for groundwater monitoring and that allow for detection and quantification of contaminants specified in this

Subpart, and that are consistent with the sampling and analytical methods specified in 35 Ill. Adm. Code 620.

c) A determination of the groundwater head elevation each time groundwater is sampled. A determination of the groundwater head elevation is not required for samples taken from a potable well used as a monitoring well pursuant to Section 615.204(b).

d) A determination at least annually of the groundwater flow rate and direction.

e) If the owner or operator determines that the groundwater monitoring program no longer satisfies the requirements of this Section, the owner or operator shall, within 90 days, make appropriate changes to the program and shall notify the Agency of such changes when submitting the groundwater monitoring reports under Section 615.208.

Section 615.206 Contaminants to be Monitored

a) The owner or operator shall monitor for all parameters that meet the following criteria, except as provided in subsections (b) and (c):

1) Material containing such parameter is stored, disposed of, or otherwise handled at the site; and

2) There is a groundwater standard for such parameter.

b) The owner or operator of a unit subject to Subpart I for the storage and handling of pesticides shall monitor for five specific pesticides or five groups of chemically-similar pesticides stored or handled at the unit that are the most likely to enter into the groundwater from the unit and that are the most toxic. The owner or operator shall choose the five specific pesticides or five groups based upon the following criteria:

1) The volume of material stored or handled at the unit;

2) The leachability characteristics of the pesticides stored or handled at the unit;

3) The toxicity characteristics of the pesticides stored or handled at the unit;

4) The history of spillage of the pesticides stored or handled at the unit; and

5) Any groundwater standards for the pesticides stored or handled at the unit.

c) The owner or operator of a unit subject to Subpart J for the storage and handling of fertilizers shall monitor for pH, specific conductance, total organic carbon, nitrates as nitrogen, and ammonia nitrogen.

Section 615.207 Sampling Frequency

a) The owner or operator shall determine whether groundwater standards have been exceeded at each monitoring well at least quarterly during the compliance period, except as provided otherwise in subsections (b), (c) or Section 615.209(b).

b) The owner or operator of a unit subject to Subpart I for the storage and handling of pesticides or Subpart J for the storage and handling of fertilizer may substitute the quarterly determination of subsection (a) with a determination at least semi-annually provided that all of the following conditions are met:

1) The unit is in compliance with the containment requirements of 8 Ill. Adm. Code 255;

2) There have been no detections within the preceding two years in any of the monitoring wells of any contaminant stored or handled at the facility or of any contaminant attributable to operation of the unit; and

3) No reportable agrichemical spills, as defined pursuant to 8 Ill. Adm. Code 255, have occurred at the facility within the previous two years.

c) The owner or operator of a unit subject to Subpart K for the storage and handling of road oils or Subpart L for the storage and handling of de-icing agents shall determine whether groundwater standards have been exceeded at each monitoring well at least annually during the compliance period, except as provided at Section 615.209(b).

Section 615.208 Reporting

The owner or operator shall submit results of all monitoring required pursuant to this Subpart to the Agency within 60 days after completion of sampling.

Section 615.209 Non-Compliance Response Program

If monitoring results collected pursuant to Sections 615.206 and 615.207 show that a groundwater standard has been exceeded, the owner or operator shall:

a) Notify the Agency of this finding when submitting the groundwater monitoring results required pursuant to Section 615.208. The notification must indicate which groundwater standards have been exceeded.

b) Resample the groundwater within 3 days in all monitoring wells where a groundwater standard has been exceeded and redetermine the presence and concentration of each parameter required pursuant to Section 615.206, except that:

1) If the unit is subject to Subpart I for the storage and related handling of pesticides, resample the groundwater within 3 days in all monitoring wells where a groundwater standard has been exceeded and determine the presence and concentration in each such sample of each pesticide previously and presently stored or handled at the unit.

2) If the unit is subject to Subpart J for the storage and related handling of fertilizers, monitor monthly for the parameters set forth in Section 615.206(c) until the groundwater standard is no longer exceeded.

c) Submit the results of sampling required under subsection (b) when submitting the groundwater results required pursuant to Section 615.208.

d) Prepare an engineering feasibility plan for a corrective action program designed to achieve the requirements of Section 615.211. This plan shall be submitted to the Agency in writing within 120 days after the date on which the sample results are submitted to the Agency pursuant to subsection (c), unless:

1) None of the parameters identified under subsection (b) exceed the groundwater standards; or

2) The owner or operator makes a demonstration pursuant to Section 615.210.

e) Begin the corrective action program specified in subsection (d) within 120 days after the date on which the sample results are submitted to the Agency pursuant to subsection (c), unless:

1) None of the parameters identified under subsection (b) exceed the groundwater standards; or

2) The owner or operator makes a demonstration pursuant to Section 615.210.

Section 615.210 Alternate Non-Compliance Response Program

If the groundwater sampling required pursuant to Section 615.207 shows that a groundwater standard has been exceeded, it is presumed that contamination from the facility or unit that is being monitored is responsible for the standard being exceeded. An owner or operator may overcome that presumption by making a demonstration that a source other than the facility or unit that is being monitored caused the exceedence or that the exceedence resulted from error in sampling, analysis or evaluation. In making such demonstration the owner or operator shall:

a) Notify the Agency that the owner or operator intends to make a demonstration under this Section when submitting the groundwater monitoring results required pursuant to Section 615.208.

b) Submit a report to the Agency that demonstrates that a source other than a facility or unit for which he is the owner or operator caused the groundwater standard to be exceeded, or that the groundwater standard was exceeded due to an error in sampling, analysis or evaluation. Such report must be included with the next submission of groundwater monitoring results required pursuant to Section 615.208; and

c) Continue to monitor in accordance with the groundwater monitoring program established pursuant to Sections 615.205, 615.206, and 615.207.

Section 615.211 Corrective Action Program

An owner or operator required to conduct a corrective action program pursuant to this Subpart shall:

a) Begin corrective action within 120 days after the date on which the sample results are submitted to the Agency pursuant to Section 615.209(c).

b) Take corrective action that results in compliance with the groundwater standards at the compliance point or points.

c) Establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program.

d) Take corrective action that maintains compliance with the groundwater standards:

1) At all compliance points; and

2) Beyond the unit boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the Agency that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner or operator is not relieved of responsibility to clean up a release that has migrated beyond the unit boundary where off-site access is denied.

e) Continue corrective action measures during the compliance period to the extent necessary to ensure that the groundwater standard is not exceeded at the compliance point or points. If the owner or operator is still conducting corrective action at the end of the compliance period, the owner or operator shall continue that corrective action for as long as necessary to achieve compliance with the groundwater standards. The owner or operator may terminate corrective action measures taken beyond the compliance period if the owner or operator can demonstrate, based on data from the groundwater monitoring program under subsection (c), that the groundwater standards have not been exceeded for a period of three consecutive years.

f) Report in writing to the Agency on the effectiveness of the corrective action program. The owner or operator shall submit these reports semi-annually.

g) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this Section, the owner or operator shall, within 90 days, make any appropriate changes to the program.

SUBPART C: GENERAL CLOSURE AND POST-CLOSURE REQUIREMENTS

Section 615.301 Applicability

This Subpart applies to:

a) Land treatment units subject to Subpart E;

b) Surface impoundments subject to Subpart F;

c) Pesticide storage and handling units subject to Subpart I; and

d) Fertilizer storage and handling units subject to Subpart J.

Section 615.302 Closure Performance Standard

The owner or operator shall close the unit in a manner that:

a) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of waste, waste constituents, leachate, contaminated runoff or waste decomposition products to soils, groundwaters, surface waters, and the atmosphere;

b) Minimizes the need for maintenance during and beyond the post-closure care period; and

c) Complies with the closure requirements of 35 Ill. Adm. Code: Subtitles C and G.

Section 615.303 Certification of Closure

Within 60 days after completion of closure, the owner or operator shall submit to the Agency, by registered or certified mail, a certification that the unit has been closed in accordance with the closure requirements. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Agency upon request.

Section 615.304 Survey Plat

a) No later than the submission of the certification of closure of each unit, the owner or operator shall submit to any local zoning authority, or authority with jurisdiction over local land use, and to the Agency, and record with land titles, a survey plat indicating the location and dimensions of any waste disposal units, and any pesticide or fertilizer storage and handling units, with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a registered land surveyor.

b) For pesticide storage and handling units or for fertilizer storage and handling units, records or reports required under any other state or Federal regulatory program and which contain the information required above may be used to satisfy this reporting requirement.

Section 615.305 Post-Closure Notice for Waste Disposal Units

No later than 60 days after certification of closure of the unit, the owner or operator of a unit subject to Subpart D or F shall

submit to the Agency, to the County Recorder and to any local zoning authority or authority with jurisdiction over local land use, a record of the type, location and quantity of wastes disposed of within each cell or other area of the unit.

Section 615.306 Certification of Completion of Post-Closure Care

No later than 60 days after completion of the established post-closure care period, the owner or operator shall submit to the Agency, by registered or certified mail, a certification that the post-closure care period for the unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Agency upon request.

Section 615.307 Post-Closure Care Period

The post-closure care period is as defined at Section 615.202.

SUBPART D: ON-SITE LANDFILLS

Section 615.401 Applicability

This Subpart applies to existing landfill units that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any existing landfill unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 615.105.

Section 615.402 Required Closure of Units Located Within Minimum Setback Zones

No person shall cause or allow the operation within a minimum setback zone of any landfill unit commencing two years after the effective date of this Part. Closure shall be completed three years after the effective date of this Part.

Section 615.403 Required Closure of Units Located Within Maximum Setback Zones

No person shall cause or allow the operation within a maximum setback zone of any landfill unit at which special waste is disposed, commencing two years after the effective date of the ordinance or regulation that establishes the maximum setback

zone. Closure shall be completed within three years after the effective date of the ordinance or regulation that establishes the maximum setback zone.

Section 615.404 Required Closure of Units Located Within Regulated Recharge Areas

No person shall cause or allow the operation within a regulated recharge area of any landfill unit that contains special waste and for which the distance from the wellhead of the community water supply well to any part of the landfill unit is 2500 feet or less. This provision becomes effective four years after the date on which the Board establishes the regulated recharge area. Closure shall be completed within five years after the date on which the Board establishes the regulated recharge area.

SUBPART E: ON-SITE LAND TREATMENT UNITS

Section 615.421 Applicability

This Subpart applies to existing land treatment units that are located wholly or partially within a setback zone or regulated recharge area and that treat or dispose of special waste or other waste generated on-site, except that this Subpart does not apply to any existing land treatment unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 615.105.

Section 615.422 Required Closure of Units Located Within Minimum Setback Zones

No person shall cause or allow the operation within a minimum setback zone of any land treatment unit commencing two years after the effective date of this Part. Closure shall be completed within three years after the effective date of this Part.

Section 615.423 Required Closure of Units Located Within Maximum Setback Zones

No person shall cause or allow the operation within a maximum setback zone of any land treatment unit at which special waste is treated or disposed, commencing two years after the effective date of the ordinance or regulation that establishes the maximum setback zone. Closure shall be completed within three years after the effective date of the ordinance or regulation that establishes the maximum setback zone.

Section 615.424 Land Treatment of Sludges in Maximum Setback Zones

Nothing in this Subpart shall prohibit land treatment within a maximum setback zone of sludge resulting from the treatment of domestic wastewater or of sludge resulting from the treatment of water to produce potable water, if such activities are conducted in accordance with the Act and 35 Ill. Adm. Code: Subtitle C.

Section 615.425 Closure and Post-Closure Care

The owner or operator shall comply with the requirements of Sections 615.302 and 615.303.

SUBPART F: ON-SITE SURFACE IMPOUNDMENTS

Section 615.441 Applicability

This Subpart applies to existing surface impoundment units that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any existing surface impoundment unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 615.105.

Section 615.442 Required Closure of Units Located Within Minimum Setback Zones

No person shall cause or allow the operation within a minimum setback zone of any surface impoundment unit commencing two years after the effective date of this Part. Closure shall be completed within three years after the effective date of this Part.

Section 615.443 Required Closure of Units Located Within Maximum Setback Zones

No person shall cause or allow the operation within a maximum setback zone of any surface impoundment unit at which special waste is stored, treated or disposed, commencing two years after the effective date of the ordinance or regulation that establishes the maximum setback zone. Closure shall be completed within three years after the effective date of the ordinance or regulation that establishes the maximum setback zone.

Section 615.444 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 615.445 Inspection Requirements

While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

a) Deterioration, malfunctions or improper operation of overtopping control systems;

b) Sudden drops in the level of the impoundment's contents;

c) Severe erosion or other signs of deterioration in dikes or other containment devices; or

d) A leaking dike.

Section 615.446 Operating Requirements

a) No person shall cause or allow incompatible materials to be placed in the same surface impoundment unit.

b) A surface impoundment unit must be removed from service in accordance with subsection (c) when:

1) The level of liquids in the unit suddenly drops and the drop is not known to be caused by changes in the flows into or out of the unit; or

2) The dike leaks.

c) When a surface impoundment unit must be removed from service as required by subsection (b), the owner or operator shall:

1) Shut off the flow or stop the addition of wastes into the impoundment unit;

2) Contain any surface leakage that has occurred or is occurring;

3) Stop the leak;

4) Take any other necessary steps to stop or prevent catastrophic failure;

5) If a leak cannot be stopped by any other means, empty the impoundment unit; and

6) Notify the Agency of the removal from service and corrective actions that were taken, such notice to be given within 10 days after the removal from service.

d) No surface impoundment unit that has been removed from service in accordance with the requirements of this Section may be restored to service unless the portion of the unit that failed has been repaired.

e) A surface impoundment unit that has been removed from service in accordance with the requirements of this Section and that is not being repaired must be closed in accordance with the provisions of Section 615.447.

Subpart 615.447 Closure and Post-Closure Care

a) If closure is to be by removal, the owner or operator shall remove all waste, all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste and leachate; and, if disposed of in the State of Illinois, dispose of them at a disposal site permitted by the Agency under the Act.

b) If closure is not to be by removal, the owner or operator shall comply with the requirements of Subpart C and shall:

1) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues.

2) Stabilize remaining wastes to a bearing capacity sufficient to support final cover.

3) Cover the surface impoundment unit with a final cover consisting of at least a 2-foot thick layer of compacted clay with a permeability of no more than 1×10^{-7} centimeters per second and designed and constructed to:

A) Provide long-term minimization of the migration of liquids through the closed impoundment unit;

B) Function with minimum maintenance;

C) Promote drainage and minimize erosion or abrasion of the final cover; and

D) Accommodate settling and subsidence so that the cover's integrity is maintained.

c) If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with the requirements of Subpart C and shall:

1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion or other events;

2) Maintain and monitor the groundwater monitoring system; and

3) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

SUBPART G: ON-SITE WASTE PILES

Section 615.461 Applicability

This Subpart applies to existing waste piles that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any existing waste pile that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris;

b) Consists of sludge resulting from the treatment of wastewater from a Publicly Owned Treatment Works (POTW) and the sludge pile is situated on an underdrained pavement and operated in accordance with the Act, 35 Ill. Adm. Code: Subtitle C and 35 Ill. Adm. Code: Subtitle G; or

c) Is exempt from this Part pursuant to Section 615.105.

Section 615.462 Required Closure

A waste pile is deemed to be a landfill and thereby subject to the closure requirements of Subpart E unless the operator can demonstrate to the Agency that the wastes are not accumulated over time for disposal. At the minimum, such demonstration shall include photographs, records, or other observable or discernable information, maintained on a yearly basis, that show that within the preceding year the waste has been removed for utilization or disposed elsewhere.

Section 615.463 Design and Operating Requirements

For a waste pile not subject to Section 615.462,

a) The owner or operator shall not cause or allow:

1) Disposal or storage in the waste pile of liquids or materials containing free liquids; or

2) Migration and runoff of leachate into adjacent soil, surface water, or groundwater.

b) The waste pile must comply with the following standards:

1) The waste pile must be under an impermeable membrane or cover that provides protection from precipitation;

2) The waste pile must be protected from surface water run-on; and

3) The waste pile must be designed and operated to control wind dispersal of waste by a means other than wetting.

c) This Section becomes applicable six months after the date of first applicability.

Section 615.464 Closure

The owner or operator shall accomplish closure by removing and disposing of all wastes and containment system components (liners, etc). If disposed of in the State of Illinois, the waste and containment system components must be disposed of at a disposal site permitted by the Agency under the Act.

SUBPART H: UNDERGROUND STORAGE TANKS

Section 615.501 Applicability

This Subpart applies to existing underground storage tanks that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste, except that this Subpart does not apply to any existing underground storage tank that:

a) Pursuant to 35 Ill. Adm. Code 731.110(a) must meet the requirements set forth in 35 Ill. Adm. Code 731, unless such a tank is excluded from those requirements pursuant to 35 Ill. Adm. Code 731.110(b); or

b) Must have interim status or a RCRA permit under 35 Ill. Adm. Code: Subtitle G; or

c) Is exempt from this Part pursuant to Section 615.105.

Section 615.502 Design and Operating Requirements

Owners and operators of existing underground storage tanks that store special waste shall meet the requirements set forth in 35 Ill. Adm. Code 731. Such requirements must be met even if the tanks are excluded from coverage under 35 Ill. Adm. Code 731 by 35 Ill. Adm. Code 731.110(b). The exclusions set forth in 35 Ill. Adm. Code 731.110(b) do not apply to any underground storage tank which stores special waste.

SUBPART I: PESTICIDE STORAGE AND HANDLING UNITS

Section 615.601 Applicability

This Subpart applies to any existing unit for the storage and handling of pesticides that is located wholly or partially within a setback zone or regulated recharge area and that:

a) Is operated for the purpose of commercial application; or

b) Stores or accumulates pesticides prior to distribution to retail sales outlets, including but not limited to a unit that is a warehouse or bulk terminal.

c) Subsections (a) and (b) notwithstanding, this Subpart does not apply to any unit exempt pursuant to Section 615.105.

Section 615.602 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 615.603 Design and Operating Requirements

The owner or operator shall:

a) Maintain a written record inventorying all pesticides stored or handled at the unit.

b) At least weekly when pesticides are being stored, inspect storage containers, tanks, vents, valves, and appurtenances for leaks or deterioration caused by corrosion or other factors. If a leak or deterioration is found in any of these devices, the owner or operator must immediately repair or replace the device. The owner or operator shall maintain a written record of

all inspections conducted under this Section and of all maintenance relating to leaks and deterioration of these devices.

c) Store all containers containing pesticides within a pesticide secondary containment structure, if such containers are stored outside of a roofed structure or enclosed warehouse. For the purpose of this subsection a pesticide secondary containment structure is a structure that complies with the design standards set forth in 8 Ill. Adm. Code 255.

d) Maintain all written records required under this Section at the site. The owner or operator shall provide any such record to the Agency upon request.

(Board Note: Owners or operators of facilities or units subject to this Part may also be subject to regulations under 8 Ill. Adm. Code 255.).

Section 615.604 Closure and Post-Closure Care

The owner or operator shall comply with the requirements of Subpart C.

SUBPART J: FERTILIZER STORAGE AND HANDLING UNITS

Section 615.621 Applicability

This Subpart applies to any existing unit for the storage and handling of fertilizers that is located wholly or partially within a setback zone or regulated recharge area and that:

a) Is operated for the purpose of commercial application; or

b) Stores or accumulates fertilizers prior to distribution to retail sales outlets, including but not limited to a unit that is a warehouse or bulk terminal.

c) Subsections (a) and (b) notwithstanding, this Subpart does not apply to any unit exempt pursuant to Section 615.105.

Section 615.622 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 615.623 Design and Operating Requirements

The owner or operator shall:

a) Maintain a written record inventorying all fertilizers stored or handled at the unit.

b) At least weekly when fertilizers are being stored, inspect storage containers, tanks, vents, valves, and appurtenances for leaks or deterioration caused by corrosion or other factors. If a leak or deterioration is found in any of these devices, the owner or operator shall immediately repair or replace the device. The owner or operator shall maintain a written record of all inspections conducted under this Section and of all maintenance relating to leaks and deterioration of these devices.

c) Store all containers containing fertilizers (except anhydrous ammonia) within a fertilizer secondary containment structure, if such containers are stored outside of a roofed structure or enclosed warehouse. For the purpose of this subsection, a fertilizer secondary containment structure is a structure that complies with the design standards set forth in 8 Ill. Adm. Code 255.

d) Maintain all written records required under this Section at the site. The owner or operator shall provide any such record to the Agency upon request.

(Board Note: Owners or operators of facilities or units subject to this Part may also be subject to regulations under 8 Ill. Adm. Code 255.)

Section 615.624 Closure and Post-Closure Care

The owner or operator shall comply with the requirements of Subpart C.

SUBPART K: ROAD OIL STORAGE AND HANDLING UNITS

Section 615.701 Applicability

This Subpart applies to any existing unit for the storage and related handling of road oils that is located wholly or partially within a setback zone or regulated recharge area and at which greater than 25,000 gallons of road oils are stored or accumulated at any one time, except as otherwise provided in Section 615.105.

Section 615.702 Required Closure of Units Located Within Minimum Setback Zones

a) No person shall cause or allow the operation within a minimum setback zone of any road oil storage and handling unit.

b) Subsection (a) is effective two years after the effective date of this Part. Closure must be completed within three years after the effective date of this Part.

Section 615.703 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 615.704 Design and Operating Requirements for Above-Ground Storage Tanks

a) The owner or operator shall not cause or allow:

1) Materials to be placed in a tank if such materials could cause the tank to rupture, leak, corrode, or otherwise fail.

2) Uncovered tanks to be placed or operated so as to maintain less than 60 centimeters (2 feet) of freeboard unless:

A) The tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank); and

B) Such containment structure, drainage control system, or diversion structure has a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.

3) Material to be continuously fed into a tank, unless the tank is equipped with a means to stop this inflow (e.g., a feed cutoff system or a bypass system to a standby tank).

4) Incompatible materials to be placed in the same tank.

5) Material to be placed in a tank that previously held an incompatible material unless the incompatible material has been washed from the tank.

6) Ignitable or reactive material to be placed in a tank unless:

A) The material is stored or treated in such a way that it is protected from any material or

conditions that may cause it to ignite or react; or

B) The tank is used solely for emergencies.

b) The owner or operator shall provide and maintain primary containment for the tank such that:

1) The tank has a minimum shell thickness that ensures that the tank will not fail (i.e., collapse, rupture, etc.).

2) The tank is compatible with the material to be placed in the tank or the tank is lined with a substance that is compatible with the material to be placed on the tank.

c) The owner or operator shall provide and maintain secondary containment for the tank that:

1) Is capable of containing the volume of the largest tank or 10% of the total volume for all tanks, whichever is greater;

2) Is constructed of material capable of containing a spill until cleanup occurs (e.g., concrete or clay). The base of the secondary containment area must be capable of minimizing vertical migration of a spill until cleanup occurs (e.g., concrete or clay);

3) Has cover (e.g., crushed rock or vegetative growth) on earthen embankments sufficient to prevent erosion; and

4) Isolates the tank from storm water drains and from combined storm water drains and sewer drains.

d) If incompatible materials are handled at the site, secondary containment sufficient to isolate the units containing the incompatible materials must be provided.

e) The owner or operator of a tank shall also:

1) Test above-ground tanks and associated piping every five years for structural integrity.

2) Remove uncontaminated storm water runoff from the secondary containment area immediately after a precipitation event.

3) Handle contaminated storm water runoff in accordance with 35 Ill. Adm. Code 302.Subpart A.

4) Provide a method for obtaining a sample from each tank.

5) Install, maintain, and operate a material level indicator on each tank.

6) When not in use, lock all gauges and valves that are used to inspect levels in the tank. All such devices must be located within the containment structure.

f) This Section becomes applicable two years after the date of first applicability.

Section 615.705 Closure

a) At closure, all materials must be removed from containers, tanks, discharge control equipment, and discharge confinement structures.

b) All materials that are to be disposed of in the State of Illinois must be disposed of at a disposal site permitted by the Agency under the Act.

SUBPART L: DE-ICING AGENT STORAGE AND HANDLING UNITS

Section 615.721 Applicability

This Subpart applies to any existing unit for the storage and related handling of de-icing agents that is located wholly or partially within a setback zone and at which more than 50,000 pounds of de-icing agent are stored or accumulated at any one time, except as otherwise provided in Section 615.105. For the purpose of this Subpart:

a) An indoor storage unit means a storage unit with a roof capable of protecting de-icing agents from wind and precipitation;

b) An outdoor storage unit means a unit for the storage of de-icing agents that is not an indoor storage unit.

Section 615.722 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 615.723 Design and Operating Requirements

a) Indoor facilities must comply with the following standards beginning two years after the date of first applicability:

1) The base of the facility must be constructed of materials capable of containing de-icing agents (i.e., bituminous or concrete pad).

2) The roof and walls of the facility must be constructed of materials capable of protecting the storage pile from precipitation and capable of preventing dissolved de-icing agents from entering into the adjacent soil, surface water, or groundwater. The walls of the facility must be constructed of materials compatible with the de-icing agents to be placed in the facility. Run-off from the roof must be diverted away from the loading pad.

3) All areas surrounding the storage pile, including but not limited to the loading pad, must be routinely inspected to determine whether any release of de-icing agents has occurred. Such areas shall be cleaned as necessary. Spilled de-icing agents must be placed back under the protective covering of the indoor storage pile. The storage pile must be reshaped as often as necessary to prevent leaching.

4) The integrity of the facility and loading pad must be maintained.

5) All areas surrounding the storage facility must be inspected daily to determine whether any release of de-icing agents has occurred. Spilled de-icing agents must be placed back into the storage facility.

b) Outdoor facilities or units must comply with the following standards beginning two years after the date of first applicability:

1) An impermeable membrane or cover must be placed over all storage piles to protect the piles from precipitation and surface water run-on. The membrane or cover must prevent run-off and leachate from being generated by the outdoor storage piles. The piles must be formed in a conical shape, covered and stored on a paved pad capable of preventing leachate from entering adjacent soil, surface water, or groundwater.

2) Surface drainage must be directed to prevent flow through the base of the storage piles. De-icing agents must not be stored where drainage may enter into water supplies, farm lands or streams.

3) All areas surrounding the storage piles must be cleaned and must be inspected daily to determine whether any release of de-icing agents has occurred. Spilled de-icing agents must be placed back under the protective covering of the outdoor storage piles. The storage piles must be reshaped as often as necessary to prevent leaching.

4) The storage piles must be designed and operated to control wind dispersal of the product by means other than wetting.

Section 615.724 Closure

a) At closure, all de-icing agents must be removed from the site, discharge control equipment and discharge confinement structures.

b) All de-icing agents that are to be disposed of in the State of Illinois must be disposed of at a disposal site permitted by the Agency under the Act.

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

PART 616
NEW ACTIVITIES IN A SETBACK ZONE OR REGULATED RECHARGE AREA

SUBPART A: GENERAL

SUBPART B: GROUNDWATER MONITORING REQUIREMENTS

SUBPART C: GENERAL CLOSURE AND POST-CLOSURE REQUIREMENTS

SUBPART D: ON-SITE LANDFILLS

SUBPART E: ON-SITE LAND TREATMENT UNITS

SUBPART F: ON-SITE SURFACE IMPOUNDMENTS

SUBPART G: ON-SITE WASTE PILES

SUBPART H: UNDERGROUND STORAGE TANKS

SUBPART I: PESTICIDE STORAGE AND HANDLING UNITS

SUBPART J: FERTILIZER STORAGE AND HANDLING UNITS

SUBPART K: ROAD OIL STORAGE AND HANDLING UNITS

SUBPART L: DE-ICING AGENT STORAGE AND HANDLING UNITS

AUTHORITY: Implementing and authorized Sections 5, 14.4, 21, 22, and 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1005, 1014.4, 1021, 1022, and 1027).

SOURCE: Adopted at R89-5 ____ Ill. Reg. _____, effective _____.

NOTE: Capitalization denotes statutory language.

SUBPART A: GENERAL

Section 616.101 Purpose

This Part prescribes requirements and standards for the protection of groundwater for certain types of new facilities or units located wholly or partially within a setback zone regulated by the Act or within a regulated recharge area as delineated pursuant to Section 17.4 of the Illinois Environmental Protection Act (Act) (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1001 et seq.).

Section 616.102 Definitions

Except as stated in this Section, and unless a different meaning of a word or term is clear from the context, the definitions of words or terms in this Part shall be the same as those used in 35 Ill. Adm. Code 615.102, the Act, or the Illinois Groundwater Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 7451 et seq.).

"NEW POTENTIAL PRIMARY SOURCE" MEANS:

A POTENTIAL PRIMARY SOURCE WHICH IS NOT IN EXISTENCE OR FOR WHICH CONSTRUCTION HAS NOT COMMENCED AT ITS LOCATION AS OF JANUARY 1, 1988; OR

A POTENTIAL PRIMARY SOURCE WHICH EXPANDS LATERALLY BEYOND THE CURRENTLY PERMITTED BOUNDARY OR, IF THE PRIMARY SOURCE IS NOT PERMITTED, THE BOUNDARY IN EXISTENCE AS OF JANUARY 1, 1988; OR

A POTENTIAL PRIMARY SOURCE WHICH IS PART OF A FACILITY THAT UNDERGOES MAJOR RECONSTRUCTION. SUCH RECONSTRUCTION SHALL BE DEEMED TO HAVE TAKEN PLACE WHERE THE FIXED CAPITAL COST OF THE NEW COMPONENTS CONSTRUCTED WITHIN A 2-YEAR PERIOD EXCEED 50% OF THE FIXED CAPITAL COST OF A COMPARABLE ENTIRELY NEW FACILITY.

(Section 3.59 of the Act)

"NEW POTENTIAL ROUTE" MEANS:

A POTENTIAL ROUTE WHICH IS NOT IN EXISTENCE OR FOR WHICH CONSTRUCTION HAS NOT COMMENCED AT ITS LOCATION AS OF JANUARY 1, 1988, OR

A POTENTIAL ROUTE WHICH EXPANDS LATERALLY BEYOND THE CURRENTLY PERMITTED BOUNDARY OR, IF THE POTENTIAL ROUTE IS NOT PERMITTED, THE BOUNDARY IN EXISTENCE AS OF JANUARY 1, 1988.

(Section 3.58 of the Act)

"NEW POTENTIAL SECONDARY SOURCE" MEANS:

A POTENTIAL SECONDARY SOURCE WHICH IS NOT IN EXISTENCE OR FOR WHICH CONSTRUCTION HAS NOT COMMENCED AT ITS LOCATION AS OF JULY 1, 1988; OR

A POTENTIAL SECONDARY SOURCE WHICH EXPANDS LATERALLY BEYOND THE CURRENTLY PERMITTED BOUNDARY OR, IF THE SECONDARY SOURCE IS NOT PERMITTED, THE BOUNDARY IN EXISTENCE AS OF JULY 1, 1988, OTHER THAN AN EXPANSION FOR HANDLING OF LIVESTOCK WASTE OR FOR TREATING DOMESTIC WASTEWATERS; OR

A POTENTIAL SECONDARY SOURCE WHICH IS PART OF A FACILITY THAT UNDERGOES MAJOR RECONSTRUCTION. SUCH RECONSTRUCTION SHALL BE DEEMED TO HAVE TAKEN PLACE WHERE THE FIXED CAPITAL COST OF THE NEW COMPONENTS CONSTRUCTED WITHIN A 2-YEAR PERIOD EXCEED 50% OF THE FIXED CAPITAL COST OF A COMPARABLE ENTIRELY NEW FACILITY.

(Section 3.60 of the Act)

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

IS UTILIZED FOR THE TREATMENT, STORAGE, OR DISPOSAL OF ANY HAZARDOUS OR SPECIAL WASTE NOT GENERATED AT THE SITE; OR

IS UTILIZED FOR THE DISPOSAL OF MUNICIPAL WASTE NOT GENERATED AT THE SITE, OTHER THAN LANDSCAPE WASTE AND CONSTRUCTION AND DEMOLITION DEBRIS; OR

IS UTILIZED FOR THE LANDFILLING, LAND TREATING, SURFACE IMPOUNDING OR PILING OF ANY HAZARDOUS OR SPECIAL WASTE THAT IS GENERATED ON THE SITE OR AT OTHER SITES OWNED, CONTROLLED OR OPERATED BY THE SAME PERSON; OR

STORES OR ACCUMULATES AT ANY TIME MORE THAN 75,000 POUNDS ABOVE GROUND, OR MORE THAN 7,500 POUNDS BELOW GROUND, OF ANY HAZARDOUS SUBSTANCES.

(Section 3.59 of the Act)

"POTENTIAL ROUTE" MEANS ABANDONED AND IMPROPERLY PLUGGED WELLS OF ALL KINDS, DRAINAGE WELLS, ALL INJECTION WELLS, INCLUDING CLOSED LOOP HEAT PUMP WELLS, AND ANY EXCAVATION FOR THE DISCOVERY, DEVELOPMENT OR PRODUCTION OF STONE, SAND OR GRAVEL. (Section 3.58 of the Act)

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

IS UTILIZED FOR THE LANDFILLING, LAND TREATING, OR SURFACE IMPOUNDING OF WASTE THAT IS GENERATED ON THE SITE OR AT OTHER SITES OWNED, CONTROLLED OR OPERATED BY THE SAME PERSON, OTHER THAN LIVESTOCK AND LANDSCAPE WASTE, AND CONSTRUCTION AND DEMOLITION DEBRIS; OR

STORES OR ACCUMULATES AT ANY TIME MORE THAN 25,000 BUT NOT MORE THAN 75,000 POUNDS ABOVE GROUND, OR MORE THAN 2,500 BUT NOT MORE THAN 7,500 POUNDS BELOW GROUND, OF ANY HAZARDOUS SUBSTANCES; OR

STORES OR ACCUMULATES AT ANY TIME MORE THAN 25,000 GALLONS ABOVE GROUND, OR MORE THAN 500 GALLONS BELOW GROUND, OF PETROLEUM, INCLUDING CRUDE OIL OR ANY FRACTION THEREOF WHICH IS NOT OTHERWISE

SPECIFICALLY LISTED OR DESIGNATED AS A HAZARDOUS SUBSTANCE; OR

STORES OR ACCUMULATES PESTICIDES, FERTILIZERS, OR ROAD OILS FOR PURPOSES OF COMMERCIAL APPLICATION OR FOR DISTRIBUTION TO RETAIL SALES OUTLETS; OR

STORES OR ACCUMULATES AT ANY TIME MORE THAN 50,000 POUNDS OF ANY DE-ICING AGENT; OR

IS UTILIZED FOR HANDLING LIVESTOCK WASTE OR FOR TREATING DOMESTIC WASTEWATERS OTHER THAN PRIVATE SEWAGE DISPOSAL SYSTEMS AS DEFINED IN THE PRIVATE SEWAGE DISPOSAL LICENSING ACT Ill. Rev. Stat. 1989, ch. 111 1/2, par. 116.301 et seq.

(Section 3.60 of the Act)

Section 616.104 Exceptions to Prohibitions

a) THE OWNER OF A NEW POTENTIAL PRIMARY SOURCE OR A POTENTIAL SECONDARY SOURCE MAY SECURE A WAIVER FROM THE prohibitions specified in Sections 616.402(a), 616.422(a), 616.442, 616.462(a), 616.602, 616.622, 616.702 or 616.722(a) against construction or operation within the setback zone FOR A POTABLE WATER SUPPLY WELL OTHER THAN A COMMUNITY WATER SUPPLY. A WRITTEN REQUEST FOR A WAIVER SHALL BE MADE TO THE OWNER OF THE WATER WELL AND THE AGENCY. SUCH REQUEST SHALL IDENTIFY THE NEW OR PROPOSED POTENTIAL SOURCE, SHALL GENERALLY DESCRIBE THE POSSIBLE EFFECT OF SUCH POTENTIAL SOURCE UPON THE WATER WELL AND ANY APPLICABLE TECHNOLOGY-BASED CONTROL WHICH WILL BE UTILIZED TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, AND SHALL STATE WHETHER, AND UNDER WHAT CONDITIONS, THE REQUESTOR WILL PROVIDE AN ALTERNATIVE POTABLE WATER SUPPLY. WAIVER MAY BE GRANTED BY THE OWNER OF THE WATER WELL NO LESS THAN 90 DAYS AFTER RECEIPT UNLESS PRIOR TO SUCH TIME THE AGENCY NOTIFIES THE WELL OWNER THAT IT DOES NOT CONCUR WITH THE REQUEST. (Section 14.2(b) of the Act)

b) THE AGENCY SHALL NOT CONCUR WITH ANY SUCH REQUEST WHICH FAILS TO ACCURATELY DESCRIBE REASONABLY FORESEEABLE EFFECTS OF THE POTENTIAL SOURCE OR POTENTIAL ROUTE UPON THE WATER WELL OR ANY APPLICABLE TECHNOLOGY-BASED CONTROLS. SUCH NOTIFICATION BY THE AGENCY SHALL BE IN WRITING, AND SHALL INCLUDE A STATEMENT OF REASONS FOR THE NONCONCURRENCE. WAIVER OF THE MINIMUM SETBACK ZONE SHALL EXTINGUISH THE WATER WELL OWNER'S RIGHTS UNDER SECTION 6b OF THE ILLINOIS WATER WELL CONSTRUCTION CODE BUT SHALL NOT PRECLUDE POLLUTION. IF THE OWNER OF THE WATER WELL HAS NOT GRANTED A WAIVER WITHIN 120 DAYS AFTER RECEIPT OF THE REQUEST OR THE AGENCY HAS NOTIFIED THE OWNER THAT IT DOES NOT CONCUR WITH THE REQUEST, THE OWNER OF A POTENTIAL SOURCE OR POTENTIAL

ROUTE MAY FILE A PETITION FOR AN EXCEPTION WITH THE BOARD AND THE AGENCY PURSUANT TO subsection (b) OF THIS SECTION. (Section 14.2(b) of the Act)

c) NO WAIVER UNDER THIS SECTION IS REQUIRED WHERE THE POTABLE WATER SUPPLY WELL IS PART OF A PRIVATE WATER SYSTEM AS DEFINED IN THE ILLINOIS GROUNDWATER PROTECTION ACT, AND THE OWNER OF SUCH WELL WILL ALSO BE THE OWNER OF A NEW POTENTIAL SECONDARY SOURCE OR A POTENTIAL ROUTE. IN SUCH INSTANCES, A PROHIBITION OF 75 FEET SHALL APPLY AND THE OWNER SHALL NOTIFY THE AGENCY OF THE INTENDED ACTION SO THAT THE AGENCY MAY PROVIDE INFORMATION REGARDING THE POTENTIAL HAZARDS ASSOCIATED WITH LOCATION OF A POTENTIAL SECONDARY SOURCE OR POTENTIAL ROUTE IN CLOSE PROXIMITY TO A POTABLE WATER SUPPLY WELL. (Section 14.2(b) of the Act)

d) THE BOARD MAY GRANT AN EXCEPTION FROM THE SETBACK REQUIREMENTS OF THIS SECTION AND SECTION 14.3 TO THE OWNER OF A NEW POTENTIAL PRIMARY SOURCE OTHER THAN LANDFILLING OR LAND TREATING, OR A NEW POTENTIAL SECONDARY SOURCE. THE OWNER SEEKING AN EXCEPTION WITH RESPECT TO A COMMUNITY WATER SUPPLY WELL SHALL FILE A PETITION WITH THE BOARD AND THE AGENCY. THE OWNER SEEKING AN EXCEPTION WITH RESPECT TO A POTABLE WATER SUPPLY WELL SHALL FILE A PETITION WITH THE BOARD AND THE AGENCY, AND SET FORTH THEREIN THE CIRCUMSTANCES UNDER WHICH A WAIVER HAS BEEN SOUGHT BUT NOT OBTAINED PURSUANT TO subsection (a) OF THIS SECTION. A PETITION SHALL BE ACCOMPANIED BY PROOF THAT THE OWNER OF EACH POTABLE WATER SUPPLY WELL FOR WHICH SETBACK REQUIREMENTS WOULD BE AFFECTED BY THE REQUESTED EXCEPTION HAS BEEN NOTIFIED AND BEEN PROVIDED WITH A COPY OF THE PETITION. A PETITION SHALL SET FORTH SUCH FACTS AS MAY BE REQUIRED TO SUPPORT AN EXCEPTION, INCLUDING A GENERAL DESCRIPTION OF THE POTENTIAL IMPACTS OF SUCH POTENTIAL SOURCE OR POTENTIAL ROUTE UPON GROUNDWATERS AND THE AFFECTED WATER WELL, AND AN EXPLANATION OF THE APPLICABLE TECHNOLOGY-BASED CONTROLS WHICH WILL BE UTILIZED TO MINIMIZE THE POTENTIAL FOR CONTAMINATION OF THE POTABLE WATER SUPPLY WELL. (Section 14.2(c) of the Act)

e) THE BOARD SHALL GRANT AN EXCEPTION, WHENEVER IT IS FOUND UPON PRESENTATION OF ADEQUATE PROOF, THAT COMPLIANCE WITH THE SETBACK REQUIREMENTS OF THIS SECTION WOULD POSE AN ARBITRARY AND UNREASONABLE HARDSHIP UPON THE PETITIONER, THAT THE PETITIONER WILL UTILIZE THE BEST AVAILABLE TECHNOLOGY CONTROLS ECONOMICALLY ACHIEVABLE TO MINIMIZE THE LIKELIHOOD OF CONTAMINATION OF THE POTABLE WATER SUPPLY WELL, THAT THE MAXIMUM FEASIBLE ALTERNATIVE SETBACK WILL BE UTILIZED, AND THAT THE LOCATION OF SUCH POTENTIAL SOURCE OR POTENTIAL ROUTE WILL NOT CONSTITUTE A SIGNIFICANT HAZARD TO THE POTABLE WATER SUPPLY WELL. (Section 14.2(c) of the Act)

f) A DECISION MADE BY THE BOARD PURSUANT TO THIS SUBSECTION SHALL CONSTITUTE A FINAL DETERMINATION. (Section 14.2(c) of the Act)

g) THE GRANTING OF AN EXCEPTION BY THE BOARD SHALL NOT EXTINGUISH THE WATER WELL OWNER'S RIGHTS UNDER SECTION 6b OF THE ILLINOIS WATER WELL CONSTRUCTION CODE IN INSTANCES WHERE THE OWNER HAS ELECTED NOT TO PROVIDE A WAIVER PURSUANT TO subsection (a) OF THIS SECTION. (Section 14.2(a) of the Act)

Section 616.105 General Exceptions

a) This Part does not apply to any facility or unit, or to the owner or operator of any facility or unit, for which:

1) The owner or operator obtains certification of minimal hazard pursuant to Section 14.5 of the Act; or

2) Alternate requirements are imposed in an adjusted standard proceeding or in a site-specific rulemaking, pursuant to Title VII of the Act; or

3) Alternate requirements are imposed in a regulated recharge area proceeding pursuant to Section 17.4 of the Act.

b) Nothing in this Section shall limit the authority of the Board to impose requirements on any facility or unit within any portion of any setback zone or regulated recharge area in any adjusted standard proceeding, site-specific rulemaking or a regulatory proceeding establishing the regulated recharge area.

SUBPART B: GROUNDWATER MONITORING REQUIREMENTS

Section 616.201 Applicability

This Subpart applies to:

a) Land treatment units subject to Subpart E;

b) Surface impoundments subject to Subpart F;

c) Pesticide storage and handling units subject to Subpart I;

d) Fertilizer storage and handling units subject to Subpart J;

e) Road oil storage and handling units subject to Subpart K; and

f) De-icing agent storage and handling units subject to Subpart L.

Section 616.202 Compliance Period

The compliance period is the active life of the unit, including closure and post-closure care periods.

a) The active life begins when the unit first begins operation or one year after the date of first applicability, whichever occurs later, and ends when the post-closure care period ends.

b) The post-closure care period for units other than pesticide storage and handling units subject to Subpart I and fertilizer storage and handling units subject to Subpart J is five years after closure, except as provided at Section 616.211(e).

c) The post-closure care period for pesticide storage and handling units subject to Subpart I and for fertilizer storage and handling units subject to Subpart J is three years after closure, except as provided at Section 616.211(e).

d) Subsections (a), (b), and (c) notwithstanding, no post-closure care period is required if all waste, waste residues, contaminated containment system components and contaminated subsoils are removed or decontaminated at closure, and no ongoing corrective action is required pursuant to Section 616.211.

Section 616.203 Compliance With Groundwater Standards

The owner or operator shall comply with the groundwater standards.

a) The term of compliance is the compliance period.

b) Compliance shall be measured at the compliance point, or compliance points if more than one such point exists.

Section 616.204 Groundwater Monitoring System

a) The groundwater monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield groundwater samples that:

1) Represent the quality of background water that has not been affected by contamination from the facility or unit; and

2) Represent the quality of groundwater at the compliance point or points.

b) If a facility contains more than one unit, separate groundwater monitoring systems are not required for each unit, provided that provisions for sampling the groundwater will enable detection and measurement of contaminants that have entered the groundwater from all units.

c) Monitoring wells must meet the following requirements:

1) Construction must be done in a manner that will enable the collection of groundwater samples;

2) Casings and screens must be made from durable material that is resistant to expected chemical or physical degradation and that does not interfere with the quality of groundwater samples being collected; and

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

Section 616.205 Groundwater Monitoring Program

The owner or operator shall develop a groundwater monitoring program that consists of:

a) Consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of groundwater quality below the unit. At a minimum the program must include procedures and techniques for:

1) Sample collection;

2) Sample preservation and shipment;

3) Analytical procedures; and

4) Chain of custody control.

b) Sampling and analytical methods that are appropriate for groundwater monitoring and that allow for detection and quantification of contaminants specified in this

Subpart, and that are consistent with the sampling and analytical methods specified in 35 Ill. Adm. Code 620.

c) A determination of the groundwater head elevation each time groundwater is sampled.

d) A determination at least annually of the groundwater flow rate and direction.

e) If the owner or operator determines that the groundwater monitoring program no longer satisfies the requirements of this Section, the owner or operator shall, within 90 days, make appropriate changes to the program. Conditions under which a groundwater monitoring program no longer satisfies the requirements of this Section include, but are not limited to:

1) A Maximum Allowable Result (MAR) is exceeded in any monitoring well that is being used as a background monitoring well or that the owner or operator has previously determined to be hydraulically upgradient from the facility; or

2) A redetermination of groundwater flow rate and direction conducted pursuant to subsection (d) shows that the existing monitoring system is not capable of assessing groundwater quality at the compliance points or points.

Section 616.206 Reporting

The owner or operator shall submit results of all monitoring required pursuant to this Subpart to the Agency within 60 days after completion of sampling.

Section 616.207 Determining Background Values and Maximum Allowable Results ("MARs")

a) The owner or operator shall, beginning no later than the beginning of operation of the unit and continuing for a period of at least one year, sample each monitoring well at least every two months and analyze each such sample according to the following program:

1) For a unit subject to Subpart E (land treatment units), Subpart F (surface impoundments), Subpart K (road oil storage and handling units), or Subpart L (de-icing agent storage and handling units), analysis shall be for pH, specific conductance, total organic carbon, total organic halogen, and any other parameter that meets the following criteria:

A) Material containing such parameter is stored, treated or disposed of at the unit; and

B) There is a groundwater standard for such parameter.

2) For a unit subject to Subpart I for the storage and handling of pesticides, analysis shall be for each pesticide stored or handled at the unit.

3) For a unit subject to Subpart J for the storage and handling of fertilizer analysis shall be for pH, specific conductance, total organic carbon, nitrates as nitrogen, ammonia nitrogen and for any other parameter that meets the following criteria:

A) Material containing such parameter is stored or handled at the unit; and

B) There is a groundwater standard for such parameter.

b) The results obtained under subsection (a) shall be used to calculate the background mean, background standard deviation and the Maximum Allowable Result (hereinafter referred to as "MAR") for each parameter using the following procedures:

1) Results from all samples collected during the year must be used in the calculations unless the owner or operator demonstrates to the Agency that one or more of the results was due to error in sampling, analysis or evaluation.

2) All calculations must be based on a minimum of at least six sample measurements per parameter per well.

3) If any measured value is equal to or greater than its PQL, or if any measured value is greater than its corresponding groundwater standard, the actual measured value must be used calculating the mean and standard deviation.

4) If any measured value is less than its PQL and less than its corresponding groundwater standard, the PQL rather than the measured value is to be used in calculating the mean and standard deviation.

5) Except for pH, the MAR is the quantity equal to the measured mean value of the contaminant plus

the product of the contaminant's standard deviation times the following constant:

Sample Size	Constant
6	2.10
7	2.03
8	1.97
9	1.93
10	1.90
11	1.88
12	1.85
13	1.84
14	1.82

6) For pH, the upper limit for the MAR is the quantity equal to the measured background mean pH plus the product of the calculated background standard deviation of the samples times the constant tabulated in subsection (a)(5).

7) For pH, the lower limit of the MAR is the quantity equal to the measured background mean pH minus the product of the calculated background standard deviation of the samples times the constant tabulated in subsection (a)(5).

Section 616.208 Continued Sampling

Upon completion of the background sampling required pursuant to Section 616.207, the owner or operator shall sample each monitoring well for the duration of the compliance period and analyze each sample, except as provided in Section 616.209, according to the following program:

a) For a unit subject to Subpart E (land treatment units) or Subpart F (surface impoundments), sampling shall be at least quarterly and analysis shall be for pH, specific conductance, total organic carbon, total organic halogen, and any other parameter that meets the following criteria:

1) Material containing such parameter is stored, treated or disposed of at the unit; and

2) The Board has adopted a groundwater standard for such parameter.

b) For a unit subject to Subpart I for the storage and handling of pesticides, sampling shall be at least quarterly, except as provided in subsection (d), and analysis shall be for five specific pesticides or five groups of chemically-similar pesticides stored or handled at the unit that are the most likely to enter

into the groundwater from the unit and that are the most toxic. The owner or operator shall choose the five specific pesticides or five groups based upon the following criteria:

1) The volume of the pesticides stored or handled at the unit;

2) The leachability characteristics of the pesticides stored or handled at the unit;

3) The toxicity characteristics of the pesticides stored or handled at the unit;

4) The history of spillage of the pesticides stored or handled at the unit; and

5) Any groundwater standards for the pesticides stored or handled at the unit.

c) For a unit subject to Subpart J for the storage and handling of fertilizer, sampling shall be at least quarterly, except as provided in subsection d), and analysis shall be for pH, total organic carbon, nitrates as nitrogen, ammonia nitrogen, and specific conductance.

d) Subsections (b) and (c) notwithstanding, for a unit subject to Subpart I for the storage and handling of pesticides or for a unit subject to Subpart J for the storage and handling of fertilizers, sampling shall be at least semi-annually provided that all of the following conditions are met:

1) The unit is in compliance with the containment requirements of 8 Ill. Adm. Code 255;

2) There have been no detections within the preceding two years in any of the monitoring wells of any contaminant stored or handled at the facility or of any contaminant attributable to operation of the unit; and

e) For a unit subject to Subpart K for the storage and handling of road oils or subject to Subpart L for the storage and handling of de-icing agents, sampling shall be annually and analysis shall be for pH, specific conductance, total organic carbon and total organic halogen.

Section 616.209 Preventive Notification and Preventive Response

a) Preventive notification is required for each well in which:

1) A MAR is found to be exceeded (except for pH), or

2) There is a detection of any contaminant:

A) Required to be monitored under Section 616.207(a);

B) Listed under 35 Ill. Adm. Code 620.310(a)(3)(A) (except due to natural causes and except for pH);

C) Denoted as carcinogen under 35 Ill. Adm. Code 620.410(b); or

D) Subject to a standard under 35 Ill. Adm. Code 620.430 (except due to natural causes).

b) Whenever preventive notification is required under subsection (a), the owner or operator of the unit shall confirm the detection by resampling the monitoring well or wells. This resampling shall be analyzed for each parameter found to be present in the first sample and be performed within 30 days after the date on which the first sample analyses are received, but no later than 90 days after the results of the first sample are received.

c) If preventive notification is provided under subsection (b) by the owner or operator and the applicable standard has not been exceeded, the Agency shall determine whether the levels for each parameter as set forth in 35 Ill. Adm. Code 620.310(a)(3)(A) are exceeded. If an exceedence is determined, the Agency shall notify the owner or operator in writing regarding such finding.

d) Upon receipt of a finding that an exceedence has occurred, the owner or operator shall submit to the Agency within 60 days a report that, at a minimum, shall include the degree and extent of contamination and the measures that are being taken to minimize or eliminate this contamination, in accordance with a prescribed schedule. The owner or operator may also provide a demonstration that:

1) The contamination is the result of contaminants remaining in groundwater from a prior release for which appropriate action was taken in accordance with the laws and regulations in existence at the time of the release;

2) The source of contamination is not due to the on-site release of contaminants; or

3) The detection resulted from error in sampling analysis or evaluation.

e) Based upon the report in subsection (d) as well as any other relevant information available to the Agency, the Agency shall provide a written response to the owner or operator that specifies either:

1) Concurrence with the preventive response being undertaken; or

2) Non-concurrence with the preventive response being undertaken and a description of the inadequacies of such action.

f) An owner or operator who receives a written response of concurrence pursuant to subsection (e) shall provide periodic program reports to the Agency regarding the implementation of the preventive response.

g) An owner or operator who receives a written response of non-concurrence pursuant to subsection (e) shall have 30 days to correct the inadequacies and to resubmit the report to the Agency or to request a conference with the Agency. Upon receipt of a written request for such a conference, the Agency shall schedule and hold the conference within 30 days. Following a conference, the Agency shall provide the owner or operator with a final determination regarding the adequacy of the preventive response.

h) An owner or operator shall be responsible for implementing adequate preventive response as determined pursuant to this Section.

i) After completion of preventive response, the concentration of a contamination listed in 35 Ill. Adm. Code 620.310(a)(3)(A) in groundwater may exceed 50 percent of the applicable numerical standard in 35 Ill. Adm. Code 620.Subpart D only if the following conditions are met:

1) The exceedence has been minimized to the extent practicable;

2) Beneficial use, as appropriate for the class of groundwater, has been assured; and

3) Any threat to public health or the environment has been minimized.

j) Nothing in this Section shall in any way limit the authority of the State or the United States to require or perform any corrective action process.

Section 616.210 Corrective Action Program

Whenever any applicable groundwater standard under 35 Ill. Adm. Code 620.Subpart D is exceeded, an owner or operator shall be required to undertake the following corrective action:

a) Notify the Agency of the need to undertake a corrective action program when submitting the groundwater monitoring results required pursuant to Section 616.206. The notification must indicate in which wells and for which parameters a groundwater standard was exceeded.

b) Continue to sample and analyze according to the provisions of Section 616.208(a), except that:

1) For all units subject to Subpart I for the storage and handling of pesticides, the frequency of all such sampling shall be quarterly until no measured values above the groundwater standard have been recorded for any parameter for two consecutive quarters.

2) For a unit subject to Subpart J for the storage and handling of fertilizers, sampling shall be quarterly for the parameters set forth in Section 616.207(a)(3) stored or handled at the unit until no measured values above the groundwater standard have been recorded for two consecutive quarters.

c) If sample values above any groundwater standard are confirmed pursuant to Section 616.209(b), the owner or operator shall:

1) Submit to the Agency an engineering feasibility plan for a corrective action program designed to achieve the requirements of subsection (e) through (j).

A) Such feasibility plan shall be submitted to the Agency within 180 days after the date of the sample in which a groundwater standard was initially exceeded.

B) This requirement is waived if no groundwater standard is exceeded in any sample taken

pursuant to subsection (b) for two consecutive quarters.

d) Except as provided in subsection (c)(1)(B), the Agency shall provide a written response to the owner or operator based upon the engineering feasibility plan and any other relevant information that specifies either:

1) Concurrence with the feasibility plan for corrective action; or

2) Non-concurrence with the feasibility plan for corrective action and a description of the inadequacies of such plan.

e) An owner or operator who receives a written response of concurrence pursuant to subsection (d) shall provide periodic progress reports to the Agency regarding the implementing of the preventive response.

f) An owner or operator who receives a written response of non-concurrence pursuant to subsection (d) shall have 30 days to correct the inadequacies and to resubmit the report to the Agency or to request a conference with the Agency. Upon receipt of a written request for such a conference, the Agency shall schedule and hold the conference within 30 days. Following a conference, the Agency shall provide the owner or operator with a final determination regarding the adequacy of the corrective action.

g) An owner or operator shall be responsible for implementing adequate preventive response as determined pursuant to this Section.

h) Except as provided in subsection (c)(1)(B), the owner or operator shall:

1) Begin the corrective action program specified in the engineering feasibility plan no later than the date of receipt of concurrence from the Agency.

2) Establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program.

3) Take corrective action that results in compliance with the groundwater standards:

A) At all compliance points; and

B) Beyond the unit boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the Agency that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner or operator is not relieved of responsibility to clean up a release that has migrated beyond the unit boundary where off-site access is denied.

4) Continue corrective action measures to the extent necessary to ensure that no groundwater standard is exceeded at the compliance point or points.

5) The owner or operator may terminate corrective action measures taken beyond the compliance period as identified at Section 616.202 if the owner or operator can demonstrate, based on data from the post-closure groundwater monitoring program under subsection (h)(2), that no groundwater standard has been exceeded for a period of three consecutive years.

6) Report in writing to the Agency on the effectiveness of the corrective action program. The owner or operator shall submit these reports semi-annually.

7) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this Section, the owner or operator shall, within 90 days, make any appropriate changes to the program.

i) Subsections (b), (c) and (f) do not apply if the owner or operator makes an alternative corrective action demonstration pursuant to Section 616.211.

Section 616.211 Alternative Corrective Action Demonstration

If a corrective action program is required pursuant to Section 616.210, it is presumed that contamination from the facility or unit that is being monitored is responsible for the groundwater standard being exceeded. An owner or operator may overcome that presumption by making a demonstration that a source other than the facility or unit that is being monitored caused the groundwater standard to be exceeded, or that the cause of the groundwater standard being exceeded is due to error in sampling, analysis or evaluation.

a) In making such demonstration the owner or operator shall

1) Notify the Agency that the owner or operator intends to make a demonstration under this Section when submitting the groundwater monitoring results required pursuant to Section 616.206; and

2) Submit a report to the Agency that demonstrates that a source other than a facility or unit for which he is the owner or operator caused the groundwater standard to be exceeded, or that the groundwater standard was exceeded due to an error in sampling, analysis or evaluation. Such report must be included with the next submission of groundwater monitoring results required pursuant to Section 616.206; and

b) The Agency shall provide a written response to the owner or operator, based upon the written demonstration and any other relevant information, that specifies either:

1) Concurrence with the written demonstration for alternative corrective action with requirements to continue to monitor in accordance with the groundwater monitoring program established pursuant to Sections 616.205 and 616.210; or

2) Non-concurrence with the written demonstration for alternative corrective action and a description of the inadequacies of such demonstration.

c) An owner or operator who receives a written response of non-concurrence pursuant to subsection (c) shall have 30 days to so respond to the Agency in writing or to request a conference with the Agency. Upon receipt of a written request for such a conference, the Agency shall schedule and hold the conference within 30 days. Following a conference, the Agency shall provide the owner or operator with a final determination regarding the adequacy of the alternative corrective action.

d) The owner or operator shall begin the corrective action program in accordance with the requirements of Section 616.210(f).

SUBPART C: GENERAL CLOSURE AND POST-CLOSURE REQUIREMENTS

Section 616.301 Applicability

This Subpart applies to:

a) Land treatment units subject to Subpart E;

b) Surface impoundments subject to Subpart F;

c) Pesticide storage and handling units subject to Subpart I; and

d) Fertilizer storage and handling units subject to Subpart J.

Section 616.302 Closure Performance Standard

The owner or operator shall close the unit in a manner that:

a) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of waste, waste constituents, leachate, contaminated runoff or waste decomposition products to soils, groundwaters, surface waters, or the atmosphere;

b) Minimizes the need for maintenance during and beyond the post-closure care period; and

c) Complies with the closure requirements of 35 Ill. Adm. Code: Subtitles C and G.

Section 616.303 Certification of Closure

Within 60 days after completion of closure of each unit, the owner or operator shall submit to the Agency, by registered or certified mail, a certification that the unit has been closed in accordance with the closure requirements. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Agency upon request.

Section 616.304 Survey Plat

a) No later than the submission of the certification of closure of each unit, the owner or operator shall submit to any local zoning authority, or authority with jurisdiction over local land use, and to the Agency, and record with land titles, a survey plat indicating the location and dimensions of any waste disposal units, and any pesticide or fertilizer storage and handling units, with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a registered land surveyor.

b) For pesticide storage and handling units or for fertilizer storage and handling units records or reports required under any other state or Federal regulatory program and which contain the information required above may be used to satisfy this reporting requirement.

Section 616.305 Post-Closure Notice for Waste Disposal Units

No later than 60 days after certification of closure of the unit, the owner or operator of a unit subject to Subparts D, E, or F shall submit to the Agency, to the County Recorder and to any local zoning authority or authority with jurisdiction over local land use, a record of the type, location and quantity of wastes disposed of within each cell or other area of the unit.

Section 616.306 Certification of Completion of Post-closure Care

No later than 60 days after completion of the established post-closure care period, the owner or operator shall submit to the Agency, by registered or certified mail, a certification that the post-closure care period for the unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Agency upon request.

Section 616.307 Post-Closure Care Period

The post-closure care period is as defined at Section 616.202.

SUBPART D: ON-SITE LANDFILLS

Section 616.401 Applicability

This Subpart applies to new landfill units which are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any new landfill unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 616.105.

Section 616.402 Prohibitions

a) Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any landfill unit that is:

1) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

2) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

b) No person shall cause or allow the disposal of special waste in a new on-site landfill unit within a regulated recharge area if the distance from the wellhead of the community water supply well to the landfill unit is 2500 feet or less, except as provided at Section 616.105.

SUBPART E: ON-SITE LAND TREATMENT UNITS

Section 616.421 Applicability

This Subpart applies to new land treatment units that are located wholly or partially within a setback zone or regulated recharge area and that treat or dispose of special waste or other waste generated on-site, except that this Subpart does not apply to any new land treatment unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 616.105.

Section 616.422 Prohibitions

a) Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any land treatment unit that is:

1) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

2) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

b) Nothing in this Section shall prohibit land treatment within a maximum setback zone regulated by the Act of

sludge resulting from the treatment of domestic wastewater or of sludge resulting from the treatment of water to produce potable water, if such activities are conducted in accordance with the Act and 35 Ill. Adm. Code: Subtitle C.

Section 616.423 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.424 Design and Operating Requirements

The owner or operator shall design and operate the land treatment site in accordance with 35 Ill. Adm. Code: Subtitle C and 35 Ill. Adm. Code: Subtitle G.

Section 616.425 Closure and Post-Closure

The owner or operator shall comply with the requirements of Subpart C.

SUBPART F: ON-SITE SURFACE IMPOUNDMENTS

Section 616.441 Applicability

This Subpart applies to new surface impoundment units that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any new surface impoundment unit that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Is exempt from this Part pursuant to Section 616.105.

Section 616.442 Prohibitions

Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any surface impoundment unit that is:

a) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

b) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

Section 616.443 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.444 Design Requirements

a) The owner or operator of a surface impoundment shall install two or more liners and a leachate collection system between such liners. The requirement for the installation of two or more liners in this subsection may be satisfied by the installation of a top liner designed, operated, and constructed of materials to prevent the migration of any constituent into such liner during the period such facility remains in operation (including any post-closure monitoring period), and a lower liner designed, operated and constructed to prevent the migration of any constituent through such liner during such period. For the purpose of the preceding sentence, a lower liner shall be deemed to satisfy such requirement if it is constructed of at least a 5-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1×10^{-7} centimeter per second.

b) A surface impoundment must be designed, constructed, maintained and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms and other equipment; and human error.

c) A surface impoundment must have dikes that are designed, constructed and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the surface impoundment.

d) The owner or operator shall maintain the following items:

   1) Records describing the contents of the impoundment; and

   2) A map showing the exact location and dimensions of the impoundment, including depth with respect to permanently surveyed benchmarks.

Section 616.445 Inspection Requirements

a) During construction and installation, liners must be inspected for uniformity, damage and imperfections (e.g., holes, cracks, thin spots or foreign materials). Immediately after construction or installation:

1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures and blisters; and

2) Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes or other structural non-uniformities that may cause an increase in the permeability of that liner or cover.

b) While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

1) Deterioration, malfunctions or improper operation of overtopping control systems;

2) Sudden drops in the level of the impoundment's contents;

3) Severe erosion or other signs of deterioration in dikes or other containment devices; or

4) A leaking dike.

Section 616.446 Operating Requirements

a) No person shall cause or allow incompatible materials to be placed in the same surface impoundment unit.

b) A surface impoundment unit must be removed from service in accordance with subsection (c) when:

1) The level of liquids in the unit suddenly drops and the drop is not known to be caused by changes in the flows into or out of the unit; or

2) The dike leaks.

c) When a surface impoundment unit must be removed from service as required by subsection (b), the owner or operator shall:

1) Shut off the flow or stop the addition of wastes into the impoundment unit;

2) Contain any surface leakage that has occurred or is occurring;

3) Stop the leak;

4) Take any other necessary steps to stop or prevent catastrophic failure;

5) If a leak cannot be stopped by any other means, empty the impoundment unit; and

6) Notify the Agency of the removal from service and corrective actions that were taken, such notice to be given within 10 days after the removal from service.

d) No surface impoundment unit that has been removed from service in accordance with the requirements of this Section may be restored to service unless the portion of the unit that failed has been repaired.

e) A surface impoundment unit that has been removed from service in accordance with the requirements of this Section and that is not being repaired must be closed in accordance with the provisions of Section 616.447.

Subpart 616.447 Closure and Post-Closure Care

a) If closure is to be by removal, the owner or operator shall remove all waste, all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste and leachate; and, if disposed of in the State of Illinois, dispose of them at a disposal site permitted by the Agency under the Act.

b) If closure is not to be by removal, the owner or operator shall comply with the requirements of Subpart C and shall:

1) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues.

2) Stabilize remaining wastes to a bearing capacity sufficient to support final cover.

3) Cover the surface impoundment unit with a final cover designed and constructed to:

A) Provide long-term minimization of the migration of liquids through the closed impoundment unit;

B) Function with minimum maintenance;

C) Promote drainage and minimize erosion or abrasion of the final cover;

D) Accommodate settling and subsidence so that the cover's integrity is maintained; and

E) Have a permeability less than or equal to the permeability of any bottom liner system.

c) If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with the requirements of Subpart C and shall for a period of 5 years after closure:

1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion or other events;

2) Maintain and monitor the groundwater monitoring system; and

3) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

SUBPART G: ON-SITE WASTE PILES

Section 616.461 Applicability

This Subpart applies to new waste piles that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste or other waste generated on-site, except that this Subpart does not apply to any new waste pile that:

a) Contains solely one or more of the following: hazardous waste, livestock waste, landscape waste, or construction and demolition debris; or

b) Consists of sludge resulting from the treatment of domestic wastewater from a POTW and the sludge pile is situated on an underdrained pavement and operated in accordance with the Act, 35 Ill. Adm. Code: Subtitle C and 35 Ill. Adm. Code: Subtitle G; or

c) Is exempt from this Part pursuant to Section 616.105.

Section 616.462 Prohibitions

a) Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any waste pile that is:

1) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

2) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

b) No person shall cause or allow the disposal of special waste in a new waste pile within a regulated recharge area if the distance from the wellhead of the community water supply well to the waste pile is 2500 feet or less, except as provided at Section 616.105.

c) Nothing in this Section shall prohibit a waste pile, within a maximum setback zone regulated by the Act, of sludge resulting from the treatment of domestic wastewater or of sludge resulting from the treatment of water to produce potable water, if such activities are conducted in accordance with the Act, 35 Ill. Adm. Code: Subtitle C, Subtile F, and Subtitle G.

Section 616.463 Design and Operating Requirements

a) No person shall cause or allow:

1) Disposal or storage in the waste pile of liquids or materials containing free liquids; or

2) Migration and runoff of leachate into adjacent soil, surface water, or groundwater.

b) A waste pile must comply with the following standards:

1) The waste pile must be under an impermeable membrane or cover that provides protection from precipitation;

2) The waste pile must be protected from surface water run-on; and

3) The waste pile must be designed and operated to control wind dispersal of waste by a means other than wetting.

Section 616.464 Closure

The owner or operator shall accomplish closure by removing and disposing of all wastes and containment system components (liners, etc). If disposed of in the State of Illinois, the waste and containment system components must be disposed of at a disposal site permitted by the Agency under the Act.

SUBPART H: UNDERGROUND STORAGE TANKS

Section 616.501 Applicability

This Subpart applies to new underground storage tanks that are located wholly or partially within a setback zone or regulated recharge area and that contain special waste, except that this Subpart does not apply to any new underground storage tank that:

a) Pursuant to 35 Ill. Adm. Code 731.110(a) must meet the requirements set forth in 35 Ill. Adm. Code 731, unless such a tank is excluded from those requirements pursuant to 35 Ill. Adm. Code 731.110(b); or

b) Must have interim status or a RCRA permit under 35 Ill. Adm. Code: Subtitle G; or

c) Is exempt from this Part pursuant to Section 616.105.

Section 616.502 Design and Operating Requirements

Owners and operators of new underground storage tanks that store special waste shall meet the requirements set forth in 35 Ill. Adm. Code 731. Such requirements must be met even if the tanks are excluded from coverage under 35 Ill. Adm. Code 731 by 35 Ill. Adm. Code 731.110(b). The exclusions set forth in 35 Ill. Adm. Code 731.110(b) shall not apply to any underground storage tank that stores special waste.

SUBPART I: PESTICIDE STORAGE AND HANDLING UNITS

Section 616.601 Applicability

a) This Subpart applies to any new unit for the storage and handling of pesticides that is located wholly or partially within a setback zone or regulated recharge area and that:

1) Is operated for the purpose of commercial application; or

2) Stores or accumulates pesticides prior to distribution to retail sales outlets, including but not limited to a unit that is a warehouse or bulk terminal.

b) Subsections (1) and (2) notwithstanding, this Subpart does not apply to any unit exempt pursuant to Section 616.105.

Section 616.602 Prohibitions

Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any unit for the storage and handling of pesticides that is:

a) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Section 616.104(a) and (b); or

b) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

Section 616.603 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.604 Design and Operating Requirements

The owner or operator shall:

a) Maintain a written record inventorying all pesticides stored or handled at the unit.

b) At least weekly when pesticides are being stored, inspect storage containers, tanks, vents, valves, and appurtenances for leaks or deterioration caused by corrosion or other factors. If a leak or deterioration is found in any of these devices, the owner or operator must immediately repair or replace the device. The owner or operator shall maintain a written record of all inspections conducted under this Section and of all maintenance relating to leaks and deterioration of these devices.

c) Store all containers containing pesticides within a pesticide secondary containment structure, if such containers are stored outside of a roofed structure or enclosed warehouse. For the purpose of this subsection, a pesticide secondary containment structure is a structure that complies with the design standards set forth in 8 Ill. Adm. Code 255.

d) Maintain all written records required under this Section at the site. The owner or operator shall provide any such record to the Agency upon request.

(Board Note: Owners or operators of facilities or units subject to this Part may also be subject to regulations under 8 Ill. Adm. Code 255.)

Section 616.605 Closure and Post-Closure Care

The owner or operator shall comply with the requirements of Subpart C.

SUBPART J: FERTILIZER STORAGE AND HANDLING UNITS

Section 616.621 Applicability

This Subpart applies to any new unit for the storage and handling of fertilizers that is located wholly or partially within a setback zone or regulated recharge area and that:

a) Is operated for the purpose of commercial application; or

b) Stores or accumulates fertilizers prior to distribution to retail sales outlets, including but not limited to a unit that is a warehouse or bulk terminal.

c) Subsections (a) and (b) notwithstanding, this Subpart shall not apply to any unit exempt pursuant to Section 616.105.

Section 616.622 Prohibitions

Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any unit for the storage and handling of fertilizers that is:

a) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

b) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

Section 616.623 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.624 Design and Operating Requirements

The owner or operator shall:

a) Maintain a written record inventorying all fertilizers stored or handled at the unit.

b) At least weekly when fertilizers are being stored, inspect storage containers, tanks, vents, valves, and appurtenances for leaks or deterioration caused by corrosion or other factors. If a leak or deterioration is found in any of these devices, the owner or operator shall immediately repair or replace the device. The owner or operator shall maintain a written record of all inspections conducted under this Section and of all maintenance relating to leaks and deterioration of these devices.

c) Store all containers containing fertilizers (except anhydrous ammonia) within a fertilizer secondary containment structure, if such containers are stored outside of a roofed structure or enclosed warehouse. For the purpose of this subsection, a fertilizer secondary containment structure is a structure that complies with the design standards set forth in 8 Ill. Adm. Code 255.

d) Maintain all written records required under this Section at the site. The owner or operator shall provide any such record to the Agency upon request.

(Board Note: Owners or operators of facilities or units subject to this Part may also be subject to regulations under 8 Ill. Adm. Code 255.)

Section 616.625 Closure and Post-Closure Care

The owner or operator shall comply with the requirements of Subpart C.

SUBPART K: ROAD OIL STORAGE AND HANDLING UNITS

Section 616.701 Applicability

This Subpart applies to any new unit for the storage and related handling of road oils that is located wholly or partially within a setback zone or regulated recharge area and at which greater than 25,000 gallons of road oils are stored or accumulated at any one time, except as otherwise provided in Section 616.105.

Section 616.702 Prohibitions

Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any unit for the storage and handling of road oils that is:

a) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

b) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

Section 616.703 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.704 Design and Operating Requirements for Above-Ground Storage Tanks

a) The owner or operator of a tank shall not cause or allow:

1) Materials to be placed in a tank if such materials could cause the tank to rupture, leak, corrode, or otherwise fail.

2) Uncovered tanks to be placed or operated so as to maintain less than 60 centimeters (2 feet) of freeboard unless:

A) The tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank); and

B) Such containment structure, drainage control system, or diversion structure has a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.

3) Material to be continuously fed into a tank, unless the tank is equipped with a means to stop this inflow (e.g., a feed cutoff system or a bypass system to a standby tank).

4) Incompatible materials to be placed in the same tank.

5) Material to be placed in a tank that previously held an incompatible material unless the incompatible material has been washed from the tank.

6) Ignitable or reactive material to be placed in a tank unless:

A) The material is stored or treated in such a way that it is protected from any material or conditions that may cause it to ignite or react; or

B) The tank is used solely for emergencies.

b) The owner or operator shall provide and maintain primary containment for the tank such that:

1) The tank has a minimum shell thickness that ensures that the tank will not fail (i.e., collapse, rupture, etc.).

2) The tank is compatible with the material to be placed in the tank or the tank is lined with a substance that is compatible with the material to be placed on the tank.

c) The owner or operator shall provide and maintain secondary containment for the tank that:

1) Is capable of containing the volume of the largest tank or 10% of the total volume for all tanks, whichever is greater;

2) Is constructed of material capable of containing a spill until cleanup occurs (e.g., concrete or clay). The base of the secondary containment area must be capable of minimizing vertical migration of a spill until cleanup occurs (e.g., concrete or clay);

3) Has cover (e.g., crushed rock or vegetative growth) on earthen embankments sufficient to prevent erosion; and

4) Isolates the tank from storm water drains and from combined storm water drains and sanitary sewer drains.

d) If incompatible materials are handled at the site, secondary containment sufficient to isolate the units containing the incompatible materials must be provided.

e) The owner or operator of a tank shall also:

1) Test above-ground tanks and associated piping every five years for structural integrity.

2) Remove uncontaminated storm water runoff from the secondary containment area immediately after a precipitation event.

3) Handle contaminated storm water runoff in accordance with 35 Ill. Adm. Code 302.Subpart A.

4) Provide a method for obtaining a sample from each tank.

5) Install, maintain, and operate a material level indicator on each tank.

6) When not in use, lock all gauges and valves that are used to inspect levels in the tank. All such devices must be located within the containment structure.

Section 616.705 Closure

a) At closure, all materials must be removed from containers, tanks, discharge control equipment, and discharge confinement structures.

b) All materials that are to be disposed of in the State of Illinois must be disposed of at a disposal site permitted by the Agency under the Act.

SUBPART L: DE-ICING AGENT STORAGE AND HANDLING UNITS

Section 616.721 Applicability

This Subpart applies to any new facility for the storage and related handling of de-icing agents that is located wholly or partially within a setback zone and at which more than 50,000 pounds of de-icing agent are stored or accumulated at any one time, except as otherwise provided in Section 616.105. For the purpose of this Subpart:

a) An indoor storage unit means a storage unit with a roof capable of protecting de-icing agents from wind and precipitation;

b) An outdoor storage unit means a unit for the storage of de-icing agents that is not an indoor storage unit.

Section 616.722 Prohibitions

a) Pursuant to Sections 14.2(a), 14.2(c) and 14.3(e) of the Act, no person shall cause or allow the construction or operation of any unit for the storage and handling of de-icing agents that is:

1) Located wholly or partially within a minimum setback zone and that is either a new potential primary source or a new potential secondary source, except as specified in Sections 616.104(a) and (b); or

2) Located wholly or partially within a maximum setback zone and that is a new potential primary source, except as specified in Section 616.104(b).

b) No person shall cause or allow the construction or operation within any setback zone of any outdoor facility for the storage and handling of de-icing agents, except as provided at Section 616.105.

Section 616.723 Groundwater Monitoring

The owner or operator shall comply with the requirements of Subpart B.

Section 616.724 Design and Operating Requirements for Indoor Storage Facilities

a) The base of the facility must be constructed of materials capable of containing de-icing agents (i.e., bituminous or concrete pad).

b) The roof and walls of the facility must be constructed of materials capable of protecting the storage pile from precipitation and capable of preventing dissolved de-icing agents from entering into the adjacent soil, surface water, or groundwater. The walls of the facility must be constructed of materials compatible with the de-icing agents to be placed in the facility. Run-off from the roof must be diverted away from the loading pad.

c) The loading pad of the facility must be constructed of materials capable of containing a spill (i.e., concrete or bituminous pad). The borders of the loading pad must be curbed to prevent dry or dissolved de-icing agents from migrating from the loading pad into the adjacent soils, surface water, or groundwater. The loading pad must be covered by a roof of sufficient size to provide the pad and de-icing agents with protection from precipitation to prevent run-off or dissolved de-icing agents from entering into the adjacent soil, surface water, or groundwater.

d) All areas surrounding the storage pile, including but not limited to the loading pad, must be routinely inspected to determine whether any release of de-icing agents has occurred. Such areas shall be cleaned as

necessary. Spilled de-icing agents must be placed back under the protective covering of the indoor storage pile. The storage pile must be reshaped as often as necessary to prevent leaching.

e) The integrity of the facility and loading pad must be maintained.

f) All areas surrounding the storage facility must be inspected daily to determine whether any release of de-icing agents has occurred. Spilled de-icing agents must be placed back into the storage facility.

Section 616.725 Closure

a) At closure, all de-icing agents must be removed from the site, discharge control equipment and discharge confinement structures.

b) All de-icing agents that are to be disposed of in the State of Illinois must be disposed of at a disposal site permitted by the Agency under the Act.

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

PART 617
REGULATED RECHARGE AREAS

SUBPART A: GENERAL

Section
617.101 Purpose
617.102 Definitions

AUTHORITY: Implementing and authorized by Sections 17.4 and 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1017.4 and 1027).

SOURCE: Adopted in R89-5 at _____ Ill. Reg. _____, effective _____.

SUBPART A: GENERAL

Section 617.101 Purpose

This Part sets out regulated recharge areas as delineated pursuant to Section 17.4 of the Illinois Environmental Protection Act (Act), Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1001 et seq.

Section 617.102 Definitions

Unless a different meaning of a word or term is clear from the context, the definition of words or terms in this Part shall be the same as those used in 35 Ill. Adm. Code 615.102, the Act, or the Illinois Groundwater Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 7451 et seq.).

IT IS SO ORDERED.

Board Members J.D. Dumelle and J. Theodore Meyer concur.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 6th day of December, 1991, by a vote of 7-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board