

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER i: SOLID WASTE AND SPECIAL WASTE HAULING

PART 812
INFORMATION TO BE SUBMITTED IN A PERMIT APPLICATION

SUBPART A: GENERAL INFORMATION REQUIRED FOR ALL
LANDFILLS

Section	
812.101	Scope and Applicability
812.102	Certification by Professional Engineer
812.103	Application Fees
812.104	Required Signatures
812.105	Approval by Unit of Local Government
812.106	Site Location Map
812.107	Site Plan Map
812.108	Narrative Description of the Facility
812.109	Location Standards
812.110	Surface Water Control
812.111	Daily Cover
812.112	Legal Description
812.113	Proof of Property Ownership and Certification
812.114	Closure Plans
812.115	Postclosure Care Plans
812.116	Closure and Postclosure Cost Estimates
812.117	Electronic Reporting

SUBPART B: ADDITIONAL INFORMATION REQUIRED FOR
INERT WASTE LANDFILLS

Section	
812.201	Scope and Applicability
812.202	Waste Stream Test Results
812.203	Final Cover
812.204	Closure Requirements

SUBPART C: ADDITIONAL INFORMATION REQUIRED FOR
PUTRESCIBLE AND CHEMICAL WASTE LANDFILLS

Section	
812.301	Scope and Applicability
812.302	Waste Analysis
812.303	Site Location
812.304	Waste Shredding
812.305	Foundation Analysis and Design

812.306	Design of the Liner System
812.307	Leachate Drainage and Collection Systems
812.308	Leachate Management System
812.309	Landfill Gas Monitoring Systems
812.310	Gas Collection Systems
812.311	Landfill Gas Disposal
812.312	Intermediate Cover
812.313	Design of the Final Cover System
812.314	Description of the Hydrogeology
812.315	Plugging and Sealing of Drill Holes
812.316	Results of the Groundwater Impact Assessment
812.317	Groundwater Monitoring Program
812.318	Operating Plans

AUTHORITY: Implementing Sections 7.2, 21, 21.1, 22, 22.17, and 22.40, and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 21, 21.1, 22, 22.17, 22.40, and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15785, effective September 18, 1990; amended in R90-26 at 18 Ill. Reg. 12185, effective August 1, 1994; amended in R06-16/R06-17/R06-18 at 31 Ill. Reg. 1461, effective December 20, 2006; amended in R17-14/R17-15/R18-12/R18-31 at 42 Ill. Reg. 21430, effective November 19, 2018.

SUBPART A: GENERAL INFORMATION REQUIRED FOR ALL LANDFILLS

Section 812.101 Scope and Applicability

- a) All persons, except those specifically exempted by Section 21(d) of the Environmental Protection Act (Act) (Ill. Rev. Stat. 1991, ch. 111 1/2, par. 1021(d)) [415 ILCS 5/21(d)] shall submit to the Agency an application for a permit to develop and operate a landfill. The applications must contain the information required by this Subpart and by Section 39(a) of the Act, except as otherwise provided in 35 Ill. Adm. Code 817.
- b) Subpart A contains general standards applicable to all landfills. Subpart B contains additional standards applicable to landfills which accept only inert waste. Subpart C contains additional standards applicable to landfills which accept chemical and putrescible waste.
- c) All general provisions of 35 Ill. Adm. Code 810 apply to this Part.

(Source: Amended at 18 Ill. Reg. 12185, effective August 1, 1994)

Section 812.102 Certification by Professional Engineer

All designs shall be prepared by, or under the supervision of, a professional engineer. The professional engineer shall affix the name of the engineer, date of preparation, registration number, a statement attesting to the accuracy of the information and design, and a professional seal to all designs.

Section 812.103 Application Fees

The permit application must be accompanied by all filing fees required pursuant to Section 5(f) of the Act.

Section 812.104 Required Signatures

- a) All permit applications shall contain the name, address, and telephone number of a duly authorized agent of the operator and the property owner to whom all inquiries and correspondence shall be addressed.
- b) All permit applications shall be signed by a duly authorized agent of the operator and the property owner, shall be accompanied by an oath or affidavit attesting to the agent's authority to sign the application and shall be notarized. The following persons are considered duly authorized agents of the operator and the property owner:
 - 1) For Corporations, a principal executive officer of at least the level of vice president;
 - 2) For a sole proprietorship or partnership, a proprietor or general partner, respectively; and
 - 3) For a municipality, state, federal or other public agency, by the head of the agency or ranking elected official.

Section 812.105 Approval by Unit of Local Government

The applicant must state whether the facility is a new regional pollution control facility, as defined in Section 3.330 of the Act, which is subject to the site location suitability approval requirements of Sections 39(c) and 39.2 of the Act. If such approval by a unit of local government is required, the application must identify the unit of local government with jurisdiction. The application must contain any approval issued by that unit of local government. If no approval has been granted, the application must describe the status of the approval request.

(Source: Amended at 42 Ill. Reg. 21430, effective November 19, 2018)

Section 812.106 Site Location Map

All permit applications shall contain a site location map on the most recent United States Geological Survey (USGS) quadrangle of the area from the 7 1/2 minute series (topographic), or on such other map whose scale clearly shows the following information:

- a) The permit area and all adjacent property, extending at least 1000 meters (3300 feet) beyond the boundary of the facility;
- b) All surface waters;
- c) The prevailing wind direction;
- d) All rivers designated for protection under the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.);
- e) The limits of all 100-year floodplains;
- f) All natural areas designated as a Dedicated Illinois Nature Preserve pursuant to the Illinois Natural Areas Preservation Act (Ill. Rev. Stat. 1989, ch. 105, par. 701 et seq.);
- g) All historic and archaeological sites designated by the National Historic Preservation Act (16 U.S.C. 470 et seq.) and the Illinois Historic Preservation Act (Ill. Rev. Stat. 1989 ch. 127, par. 133d1 et seq.);
- h) All areas identified as critical habitat pursuant to the Endangered Species Act (16 U.S.C. 1531 et seq.) and the Illinois Endangered Species Protection Act (Ill. Rev. Stat. 1989, ch. 8, par. 331 et seq.); and
- i) All main service corridors, transportation routes, and access roads to the facility.

Section 812.107 Site Plan Map

The application shall contain maps, including cross sectional maps of the site boundaries, showing the location of the facility on a scale no smaller than one inch equals 200 feet containing a two-foot contour interval. The following information shall be shown:

- a) The entire permit area;
- b) The boundaries, both above and below ground level, of the facility and all units included in the facility;
- c) Location of borrow areas;

- d) Boundaries of all areas to be disturbed;
- e) The proposed phasing of the facility, including a delineation of the approximate area to be disturbed each year and areas expected to be closed each year in compliance with 35 Ill. Adm. Code 811.107(a);
- f) All roads in and around the facility;
- g) Devices for controlling access to the facility;
- h) Devices for controlling litter;
- i) Fire protection facilities; and
- j) Utilities.

Section 812.108 Narrative Description of the Facility

The permit application shall contain a written description of the facility with supporting documentation describing the procedures and plans that will be used at the facility to comply with the requirements of 35 Ill. Adm. Code 811 and any other applicable Parts of 35 Ill. Adm. Code: Chapter I. Such descriptions shall include, but not be limited to the following information:

- a) The type of waste disposal units and the types of wastes expected in each unit;
- b) An estimate of the maximum capacity of each unit and the rate at which waste is to be placed;
- c) The manner in which waste will be placed and compacted to comply with 35 Ill. Adm. Code 811.105;
- d) The estimated unit weight of the waste;
- e) The length of time each unit will receive waste;
- f) The design period to be used for each unit;
- g) Size of the open face area, including all information showing that slopes steeper than two to one will be stable and in compliance with 35 Ill. Adm. Code 811.107(b);

- h) A description of how units will be developed to allow contemporaneous closure and stabilization pursuant to 35 Ill. Adm. Code 811.110, 811.111, 811.204, 811.205 or 811.322;
- i) A description of all equipment to be used at the facility for complying with 35 Ill. Adm. Code 807.304;
- j) A litter control plan for complying with 35 Ill. Adm. Code 811.107(k);
- k) A salvaging plan including a description of all salvage facilities and a plan for complying with 35 Ill. Adm. Code 811.108;
- l) A description of all utilities for operation in compliance with 35 Ill. Adm. Code 811.107(d);
- m) A boundary control plan describing how the operator will comply with the requirements of 35 Ill. Adm. Code 811.109;
- n) A maintenance plan describing how the operator will comply with 35 Ill. Adm. Code 811.107(c) and (e);
- o) An air quality plan describing the methods to be used to comply with the open burning requirements of 35 Ill. Adm. Code 811.107(f) and for controlling dust in compliance with 35 Ill. Adm. Code 811.107(g);
- p) A noise control plan describing how the operator will control noise in compliance with 35 Ill. Adm. Code 811.107(h);
- q) An odor control plan;
- r) A vector control plan to comply with 35 Ill. Adm. Code 811.107(i);
- s) a firefighting and fire safety plan; and
- t) A transportation plan that includes all existing and planned roads in the facility that will be used during the operation of the landfill facility; the size and type of such roads and the frequency with which they will be used.

Section 812.109 Location Standards

The permit application shall contain:

- a) Documentation that the facility will operate in compliance with 35 Ill. Adm. Code 811.102(a).

- b) A floodplain determination containing:
 - 1) Documentation that the facility is not located within the floodplain of the 100-year flood event; or
 - 2) Documentation that the facility meets the requirements of 35 Ill. Adm. Code 811.102(b).
- c) Documentation from the State Historic Preservation Officer that the facility will be in compliance with 35 Ill. Adm. Code 811.102(c).
- d) Documentation from the Illinois Nature Preserves Commission that the facility will be in compliance with 811.102(c) as it relates to Dedicated Illinois Nature Preserves.
- e) Documentation that the facility will be in compliance with 35 Ill. Adm. Code 811.102(d).
- f) Documentation that a facility located within a wetland is in compliance with Section 404 of the Clean Water Act (35 USC 1344).
- g) Documentation that the facility is in compliance with 35 Ill. Adm. Code 811.102(f).

Section 812.110 Surface Water Control

The permit application shall contain a plan for controlling surface water which demonstrates compliance with 35 Ill. Adm. Code 811.103, and which shall include at least the following:

- a) A copy of the approved National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to 35 Ill. Adm. Code 309 or, if a permit is pending, a copy of the NPDES permit application to discharge runoff from all disturbed areas on the facility;
- b) A map showing the location of all structures affected by the surface water runoff from disturbed areas on the facility;
- c) Detailed designs of all structures to be constructed during development of the facility and during the first five year operating period; and
- d) Estimated construction dates of all structures to be constructed beyond the first five year operating period.

Section 812.111 Daily Cover

The application shall contain a description of the material to be used as daily cover:

- a) A description of the soil to be used, including its classification and approximate hydraulic conductivity; or
- b) Documentation that any proposed alternative materials or procedures to substitute for daily cover meet the minimum requirements of 35 Ill. Adm. Code 811.106(b).

Section 812.112 Legal Description

The permit application shall contain a legal description of the facility boundary and the boundaries of all units included in the facility. This legal description shall identify the nature and location of all stakes and monuments required by Section 811.104 and shall be prepared by or under the supervision of a professional surveyor, who shall affix a professional seal to the work.

Section 812.113 Proof of Property Ownership and Certification

The permit application shall contain a certificate of ownership of the permit area or a copy of the lease. The lease shall clearly specify that the owner authorized the construction of a waste disposal facility on the leased premises, and the duration of the lease will be at least as long as the design period of the landfill. Any prior conduct certifications issued to the owner or operator shall be included in the permit application. The owner and operator shall certify that the Agency will be notified within seven days of any changes in ownership or conditions in the lease affecting the permit area.

Section 812.114 Closure Plans

The permit application shall contain a written closure plan which contains, at a minimum, the following:

- a) A map showing the configuration of the facility after closure of all units, with the following:
 - 1) A contour map showing the proposed final topography (after placement of the final cover) of all disturbed areas on a 1" = 200' scale and a contour interval of two feet; and
 - 2) The location of all facility-related structures to remain as permanent features after closure.

- b) Steps necessary for the premature final closure of the site at the assumed closure date, as defined in 35 Ill. Adm. Code 811.700(e);
- c) Steps necessary for the final closure of the site at the end of its intended operating life;
- d) Steps necessary to prevent damage to the environment during temporary suspension of waste acceptance if the operator wants a permit which would allow temporary suspension of waste acceptance at the site without initiating final closure;
- e) A description of the steps necessary to decontaminate equipment during closure;
- f) An estimate of the expected year of closure;
- g) Schedules for the premature and final closure, which shall include, at a minimum:
 - 1) Total time required to close the site; and
 - 2) Time required for closure activities which will allow tracking of the progress of closure; and
- h) A description of methods for compliance with all closure requirements of 35 Ill. Adm. Code 811.

Section 812.115 Postclosure Care Plans

The application shall contain a postclosure care plan which includes a written description of the measures to be taken during the postclosure care period in compliance with the requirements of 35 Ill. Adm. Code 811.

Section 812.116 Closure and Postclosure Cost Estimates

The application shall contain an estimate of the costs of closure and postclosure care and maintenance in accordance with the requirements of 35 Ill. Adm. Code 811.Subpart G.

**SUBPART B: ADDITIONAL INFORMATION REQUIRED FOR INERT WASTE
LANDFILLS**

Section 812.201 Scope and Applicability

In addition to the information required by Subpart A, an application for a permit to develop an inert waste disposal unit shall contain the information required by this Subpart.

Section 812.202 Waste Stream Test Results

The application shall contain information describing the waste and results of tests conducted on the waste pursuant to 35 Ill. Adm. Code 811.202 demonstrating that all waste entering the unit meet the definition of an inert waste.

Section 812.203 Final Cover

The permit application shall contain a description of the material to be used as the final cover, application and spreading techniques, and the types of vegetation to be planted pursuant to 35 Ill. Adm. Code 811.204.

Section 812.204 Closure Requirements

The permit application shall contain a description of how the applicant will comply with 35 Ill. Adm. Code 811.205(a) and (b).

SUBPART C: ADDITIONAL INFORMATION REQUIRED FOR PUTRESCIBLE AND CHEMICAL WASTE LANDFILLS

Section 812.301 Scope and Applicability

In addition to the information required by Subpart A, an application for a permit to develop a putrescible or chemical waste landfill shall contain the information required by this Subpart, except as otherwise provided in 35 Ill. Adm Code 817.

(Source: Amended at 18 Ill. Reg. 12185, effective August 1, 1994)

Section 812.302 Waste Analysis

An application for a landfill that accepts only chemical wastes shall include the results of a waste analysis showing that the wastes to be accepted at the facility meet the definition of a chemical waste. The analysis shall show that all wastes entering the unit will be compatible and will not react to form a hazardous substance or gaseous products.

Section 812.303 Site Location

- a)The permit application shall contain a site location map showing the location of the following structures or areas located within one mile of the facility:

- 1) All water supply wells in use for drinking water;
 - 2) All setback zones established pursuant to Section 14.2 or 14.3 of the Act;
 - 3) Any sole source aquifer, or that an impervious strata exists between the facility and the aquifer that meet the minimum requirements of 35 Ill. Adm. Code 811.302(b);
 - 4) Units located within a setback zone established pursuant to Section 14.2 or 14.3 of the Act showing that the location still meets the minimum requirements of 35 Ill. Adm. Code 811.302(b);
 - 5) All state and federal parks and recreational areas;
 - 6) All state, federal or interstate highways and the location of any barriers necessary to comply with 35 Ill. Adm. Code 811.302(c);
 - 7) All occupied dwellings, hospitals and schools; and
 - 8) All airports.
- b) If any areas or structures included in a site location map, in accordance with subsection (a), requires a demonstration or showing, then documentation of the demonstration or showing must accompany the site location map.

Section 812.304 Waste Shredding

If waste shredding is planned for the facility operation, including the landfilling of shredded waste, then the application shall contain documentation to demonstrate compliance with 35 Ill. Adm. Code 811.303(b), including a description of the mechanical shredder proposed for use.

Section 812.305 Foundation Analysis and Design

- a) The permit application shall contain a foundation study and analysis showing that the unit demonstrates compliance with 35 Ill. Adm. Code 811.304 and 811.305.
- b) The study shall be performed by or under the supervision of a registered professional engineer.
- c) The following information shall be included in the permit application:

- 1) Results of tests performed on foundation materials;
- 2) Estimated settlement of the unit;
- 3) Diagrams and cross sections of any proposed sub-base or foundation construction;
- 4) Specifications for soil to be used for foundation construction shall include, but not be limited to, soil classification, permeability, moisture content, moisture-density relationship, plasticity and strength; and
- 5) A construction quality assurance program for proper implementation of the foundation pursuant to 35 Ill. Adm. Code 811.Subpart E.

Section 812.306 Design of the Liner System

The application shall contain information to show that the design of the liner system meets the minimum requirements of 35 Ill. Adm. Code 811.306, including the following information:

- a) For Compacted Clay Liners:
 - 1) Cross sections and plan views of the liner system;
 - 2) Results of any field or laboratory tests demonstrating that the liner material complies with 35 Ill. Adm. Code 811.306(d);
 - 3) A description of the test liner, including:
 - A) Diagrams and any supporting documentation showing that the test liner will be constructed and evaluated in accordance with 35 Ill. Adm. Code 811.507(a); or
 - B) A detailed description of the test liner constructed in accordance with 35 Ill. Adm. Code 811.507(a), if constructed prior to permit application;
 - 4) A description of construction methods and equipment to be utilized; and
 - 5) A construction quality assurance plan pursuant to 35 Ill. Adm. Code 811.Subpart E.

- b) For geomembranes:
- 1) A description of the physical properties of the geomembrane;
 - 2) Documentation showing that the design of the geomembrane meets the minimum requirements of 35 Ill. Adm. Code 811.306(e);
 - 3) A description of the methods to seam the geomembrane in the field in compliance with 35 Ill. Adm. Code 811.306(e)(5);
 - 4) A plan showing the proposed layout of the individual panels and the locations of all openings through the geomembrane;
 - 5) A cross section and description of how openings in the membrane will be constructed to minimize leaks; and
 - 6) A construction quality assurance program pursuant to 35 Ill. Adm. Code 811.Subpart E for proper construction, seaming and inspection of the geomembrane.
- c) For Slurry Trenches and Cutoff Walls:
- 1) A description of the slurry trench or cutoff wall, including documentation of cross sections, material specifications and methods of construction to demonstrate compliance with 35 Ill. Adm. Code 811.306(f);
 - 2) Location and descriptions of the boreholes, including the results of any testing; and
 - 3) A construction quality assurance plan, pursuant to 35 Ill. Adm. Code 811.Subpart E.

For Alternative Liner Technology: A complete description of the technology, including documentation demonstrating that the technology will perform as required by 35 Ill. Adm. Code 811.306(f).

Section 812.307 Leachate Drainage and Collection Systems

The permit application shall contain information to demonstrate that the proposed leachate drainage and collection system will be in compliance with 35 Ill. Adm. Code 811.307 and 811.308, including:

- a) A plan view of the leachate collection system, showing pipe locations, cleanouts, manholes, sumps, leachate storage structures and other related information;

- b) Cross sections and descriptions of manholes, sumps, cleanouts, connections and other appurtenances;
- c) The locations of all leachate level monitoring locations;
- d) A stability analysis showing that the side slopes will maintain the necessary static and seismic safety factors during all phases of operation;
- e) All calculations, assumptions and information used to design the leachate collection and drainage system;
- f) A description of the methods to be used to clean and otherwise maintain the leachate collection and drainage system, including the number and location of access and cleanout points; and
- g) A construction quality assurance program to insure proper construction of the systems pursuant to 35 Ill. Adm. Code 811.Subpart E.

Section 812.308 Leachate Management System

- a) The application shall contain information to show how the applicant will comply with 35 Ill. Adm. Code 811.309, including the following information:
 - 1) Leachate disposal methods, including:
 - A) The approved NPDES permit or, if the permit is pending, the NPDES permit application;
 - B) Documentation to demonstrate that the offsite treatment works meets the requirements of 35 Ill. Adm. Code 811.309(e)(1); or
 - C) Pretreatment authorization, if necessary from the offsite publicly owned treatment works pursuant to 35 Ill. Adm. Code 310.
 - 2) Design of tanks, lagoons, and all other treatment or storage units;
 - 3) A map showing the location of all units, piping and monitoring stations; and
 - 4) A description of the leachate monitoring system, including all parameters to be monitored and the location of the sampling points.

- b) The operator may include in the application a request for authorization to recycle leachate, if desired. The request shall be supported by information to demonstrate compliance with 35 Ill. Adm. Code 811.309(f), including:
 - 1) A demonstration that the unit satisfies the criteria of 35 Ill. Adm. Code 811.309(f)(1);
 - 2) Estimates of the expected volume of excess leachate, as defined in 35 Ill. Adm. Code 811.309(f)(3);
 - 3) A plan for the disposal of excess leachate as defined in 35 Ill. Adm. Code 811.309(f)(3);
 - 4) Layout and design of the leachate distribution system; and
 - 5) Pursuant to 35 Ill. Adm. Code 811.309(f)(6), a demonstration that the daily and intermediate cover is permeable, or a plan to remove daily and intermediate cover prior to additional waste disposal.

Section 812.309 Landfill Gas Monitoring Systems

The permit application shall contain a plan to monitor the buildup and composition of landfill gas in compliance with 35 Ill. Adm. Code 811.310, including:

- a) A description of the most likely paths of migration of landfill gas expected to be generated by the unit, supported by the results of any predictive modeling study of gas flow through the strata surrounding the facility used, pursuant to 35 Ill. Adm. Code 811.310(b)(2);
- b) The location and design of sampling points; and
- c) Support for the items under subsections (a) and (b) must be provided and shall include the results of the predictive modeling study of the gas flow in accordance with 35 Ill. Adm. Code 811.310(b)(3).

Section 812.310 Gas Collection Systems

The permit application shall contain, when a gas collection system is required pursuant to 35 Ill. Adm. Code 811.311(a), a plan for collecting landfill gas from the unit. The plan shall contain information to demonstrate compliance with 35 Ill. Adm. Code 811.311, including:

- a) Location of the collection points;

- b) Layout and design of the collection system;
- c) A description of and specifications for all machinery, compressors, flares, piping and other appurtenances necessary to the system; and
- d) A gas condensate disposal plan.

Section 812.311 Landfill Gas Disposal

When a permit application contains a plan for a gas collection system, then a plan for landfill gas disposal shall be submitted. The plan shall contain information to demonstrate compliance with 35 Ill. Adm. Code 811.312, including:

- a) The approved air discharge permit or, if the permit is pending, a copy of the air discharge permit application required pursuant to 35 Ill. Adm. Code 200 thru 245;
- b) A map showing the location of the gas processing facility;
- c) Designs for the disposal system;
- d) A gas processing plan which includes a description of the beneficial uses to be derived for the gas and the design of the processing system; and
- e) Where an offsite processing plant is utilized, the application shall contain documentation showing that the plant meets all requirements of 35 Ill. Adm. Code 811.312(g).

Section 812.312 Intermediate Cover

The application shall contain a description of the material to be used as intermediate cover in accordance with 35 Ill. Adm. Code 811.313, including:

- a) A description of the soil to be used, including its classification and approximate hydraulic conductivity; or
- b) A demonstration that any proposed alternative materials or procedures to substitute for intermediate cover meet the minimum requirements of 35 Ill. Adm. Code 811.313.

Section 812.313 Design of the Final Cover System

The permit application shall contain documentation for the final cover system to demonstrate compliance with 35 Ill. Adm. Code 811.314, including:

- a) Material specifications;
- b) Placement techniques;
- c) Estimates of settling;
- d) A description of final protective cover, including a description of the soil and the depth necessary to maintain the proposed land use of the area;
- e) A description showing how the low permeability layer will tie into the liner system; and
- f) A construction quality assurance program, pursuant to 35 Ill. Adm. Code 811.Subpart E, which provides that the cover is constructed in compliance with all applicable requirements of 35 Ill. Adm. Code 811.

Section 812.314 Description of the Hydrogeology

The permit application shall contain a description of the local hydrogeologic system, which shall include the results of the investigation conducted in accordance with 35 Ill. Adm. Code 811.315 and which includes the following information:

- a) A narrative description of the regional setting;
- b) A narrative description characterizing the hydrogeological conditions within the permit area;
- c) Geological cross sections of the permit area showing all water bearing strata, water elevations and all geological units;
- d) Location of all bore holes and test pits;
- e) All well and bore logs;
- f) Laboratory and field testing data;
- g) A detailed description of each geological unit found within the study area, including physical and geochemical properties; and
- h) A description of all water bearing strata under the facility, including a potentiometric map, groundwater flow velocities and directions and a descriptions of the water quality.

Section 812.315 Plugging and Sealing of Drill Holes

The application shall contain a plan describing the techniques and materials to be utilized to plug and seal drill holes in accordance with 35 Ill. Adm. Code 811.316.

Section 812.316 Results of the Groundwater Impact Assessment

The application shall contain the results of a groundwater impact assessment showing that the proposed unit will not violate the requirements of 35 Ill. Adm. Code 811.317. The assessment shall contain, at a minimum, the following information:

- a) Documentation of the contaminant transport model used for the assessment;
- b) All data, including values of the model's parameters and site specific hydrogeologic information used in the modeling and analysis of the groundwater impact;
- c) A sensitivity analysis of the effects of changes in the model's parameters on the model's predictions;
- d) Predicted concentration versus time profiles for several points within the zone of attenuation over a predicted time period of 100 years;
- e) Predicted concentration versus distance profiles taken at five year increments for 100 years;
- f) Documentation showing reliability of the model;
- g) Documentation demonstrating validity of all model parameters and assumptions; and
- h) A written evaluation and analysis, using the information from the groundwater impact assessment, showing the results of the groundwater impacts at the facility, such as the type and geographical extent of contamination present or expected, or the rate of movement of contaminants, to demonstrate that the groundwater impact is acceptable in accordance with 35 Ill. Adm. Code 811.317(b).

Section 812.317 Groundwater Monitoring Program

The permit application shall contain a groundwater monitoring plan which demonstrates compliance with 35 Ill. Adm. Code 811.318 and 811.319 and which includes the following information:

- a) A site plan map showing all zones of attenuation;

- b) Distance from the ground surface to the bottom of the uppermost aquifer;
- c) The location and depth of all groundwater monitoring points;
- d) The design of the groundwater monitoring wells, with a description of the materials to be used in constructing each well;
- e) A list of the parameters to be tested at each monitoring point;
- f) A concentration versus time profile for each monitoring point, showing the maximum allowable concentration at that monitoring point for the 100 years after the closure of the unit;
- g) A description of the sampling procedure to be followed;
- h) A description of the preservation techniques to be utilized;
- i) A description of the chain of custody, packing and transportation plans for all samples to meet the requirements of 35 Ill. Adm. Code 811.318(e);
- j) A description of the laboratory analysis, including laboratory procedures, quality control, and error detection;
- k) A description of the statistical analysis techniques to be used for evaluating the monitoring data;
- l) A description of the groundwater quality standards applicable at the facility pursuant to 35 Ill. Adm. Code 811.320, including a specific numerical value for each constituent and including an evaluation of the background concentrations of each constituent to be monitored; and
- m) A description of the statistical method to be utilized when evaluating groundwater data.

Section 812.117 Electronic Reporting

The filing of any document pursuant to any provision of this Part as an electronic document is subject to 35 Ill. Adm. Code 810.105.

BOARD NOTE: Derived from 40 CFR 3, as added, and 40 CFR 258.29(d) (2005), as amended at 70 Fed. Reg. 59848 (Oct. 13, 2005).

(Source: Added at 31 Ill. Reg. 1461, effective December 20, 2006)

Section 812.318 Operating Plans

- a) The application shall contain all information necessary to demonstrate compliance with 35 Ill. Adm. Code 811.321(a).

- b) The application shall contain a narrative description of the initial waste placement plan, to demonstrate compliance with 35 Ill. Adm. Code 811.321(b).