ILLINOIS POLLUTION CONTROL BOARD
September 21, 1995

IN THE MATTER OF:	)	
	)	
PROPOSED ALTERNATIVE	)	
STANDARDS FOR NEW UTILITY	)	R96-1
WASTE LANDFILLS	)	(Rulemaking - Land)
35 ILL. ADM. CODE PART 816	)	

Proposed Rule First Notice

OPINION AND ORDER OF THE BOARD (by J. Yi):

Pursuant to Section 28(a) of the Environmental Protection Act (Act) (415 ILCS 5/28(a)), we are opening this rulemaking docket on the Board's own motion. The purpose of this docket is to consider amendments to 35 Ill. Adm. Code Parts 807, 810 and 811, Standards for New Solid Waste Landfills, and to propose new Part 816, which would codify a process to allow the use of Poz-O-Tec[1] materials as an alternative means of satisfying the liner and cap requirements for certain chemical waste landfills. Poz-O-Tec materials are produced through a patented stabilization process utilizing flue gas desulfurization (FGD) sludges and ash produced by coal burning power generation facilities. The proposed rule and amendments would allow owners of chemical waste landfills accepting only FGD sludges and coal combustion wastes to use Poz-O-Tec as a liner and cap material, or alternatively, would allow the monofilling of Poz-O-Tec materials for such landfills in place of using a liner and cap.

PROCEDURAL BACKGROUND

The proposed rules mirror adjusted standards granted to Conversion Systems, Inc. (CSI) Poz-O-Tec process and materials in dockets AS 93-4 and AS 93-5 on July 7, 1995. (In the Matter of: Adjusted Standard for Conversion Systems' Poz-O-Tec Liners and Caps, 35 Ill. Adm Code 811 (Liner), (July 7, 1995), AS 93-4 and In the Matter of: Adjusted Standard for Conversion Systems' Poz-O-Tec Monofills, 35 Ill. Adm Code 811 (Monofill), (July 7, 1995), AS 93-5.) While the Board granted CSI the relief requested in those two dockets, the accompanying Board opinions expressed our concern that the adjusted standards impose requirements upon entities or persons using the Poz-O-Tec process, who were not parties to the adjusted standard proceeding. Thus, opening this docket will allow affected

[1]The Poz-O-Tec material, process and name are a registered trademark.

entities and members of the public an opportunity to consider and comment on the use of Poz-O-Tec as an alternative to Part 811 at those landfills accepting only FGD sludges and coal combustion wastes. In addition, opening this docket will result in the final adopted rules being codified in the administrative code, increasing their availability to the public and allowing for the Board to consider amendments or modification as may be necessary at a future date through the rulemaking process.

The rulemaking proposal in the order accompanying this opinion consists of the language adopted as adjusted standards in AS 93-4 and AS 93-5. Both CSI and the Environmental Protection Agency (Agency) supported the Board's adoption of this language in those two dockets. The Board hereby incorporates by reference the records in AS 93-4 and AS 93-5, as well as AS 92-9, which was incorporated by reference into those two proceedings. Based on the information contained in those dockets, the Board found that the grant of adjusted standards was technically justified. The Board is proposing that this language be codified in a new Part 816, entitled "ALTERNATIVE STANDARDS FOR NEW UTILITY WASTE LANDFILLS", at a new Subpart A at Section 816.500 *et seq.*

THE POZ-O-TEC PROCESS

The proposed rules would codify a process which would allow a facility which has decided to utilize the Poz-O-Tec process two disposal options: monofilling or constructing a liner and cap of Poz-O-Tec materials. Should such facilities choose to use the Poz-O-Tec process, its decision as to which option to use would be dependent upon the ratio of flyash and sludge in its waste stream. In the record incorporated herein, CSI asserts that most facilities will be able to consistently produce high quality Poz-O-Tec materials with a permeability less than or equal to 1×10^{-7} cm/sec. (Pet. at 8.) These materials could be disposed of in a monofill.

For a facility choosing to use the monofill option, the Poz-O-Tec material would initially be stockpiled upon production, where it would begin to cure and form a cementitious material. It would then be placed upon or adjacent to Poz-O-Tec materials already in the landfill. The material would be spread in lifts, rolled to smooth, compacted, and graded so that rainfall would run off without puddling. No liner, cap, or leachate collection system would be required, since the Poz-O-Tec materials are impermeable and would not allow for leachate permeation. Additionally, intermediate cover would not be required between lifts, since newly-applied Poz-O-Tec materials will form bonds with the previously-landfilled material, forming a monolithic mass.

However, some facilities will not generate sufficient fly ash to consistently produce materials with a permeability less than or equal to 1 x 10^{-7} cm/sec. (Pet. at 8.)[2] Such a facility may, therefore, choose to produce a sufficient quantity of Poz-O-Tec materials to construct a liner and cap meeting the 1 x 10^{-7} cm/sec. standard. This would be accomplished by storing fly ash until an adequate supply is available to produce high quality Poz-O-Tec materials. (Pet. at 8.) According to the proposed rules, the landfill would then be constructed and operated in accordance with the chemical waste landfill rules.

The proposed regulations set forth criteria to allow a facility to use a Poz-O-Tec liner which is at least five feet thick, which has a permeability of 1 x 10^{-7} cm/sec. or less and an unconfined compressive strength of 150 psi or greater. The permeability and unconfined compressive strength must be verified through the construction and field testing of a test pad. The landfill must receive for disposal only FGD sludges and coal combustion wastes, and must be constructed at least five feet above the water table. The cap could be constructed of the same material as the liner, and must be at least three feet thick. The site owner would be required to do site-specific contaminant modelling, groundwater modelling and assessment and remedial action.

Today the Board acts to send this rulemaking proposal for first notice. Pursuant to Section 5.01 of the Illinois Administrative Procedure Act (IAPA) and Section 102.342 of the Board's procedural rules, the IAPA 45-day public comment period will commence upon publication of today's proposal in the Illinois Register, during which the Board will accept written comments from any person. Persons interested in providing additional comment on this proposal should submit such comments in writing to the Clerk of the Board prior to the expiration of this 45-day period.

Additionally at least two hearings must be held in the State of Illinois as any rule change resulting from this rulemaking would have state-wide applicability. (415 ILCS 5/28(a).) The assigned hearing officer shall issue a hearing officer order in the near future establishing the date, location, and time for hearing, in addition to scheduling due dates for pre-filed testimony or questions, and a public comment period.

ORDER

---

[2]"Pet. at" is in reference to the petition filed in AS 93-4 and AS 93-5 on July 2, 1993 by CSI.

The Board hereby proposes the following regulations for First Notice pursuant to the IAPA. The Board directs the Clerk to cause publication of these regulations in the Illinois Register for first notice. (The text starts on the following page.)

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

PART 807
SOLID WASTE

SUBPART A: GENERAL PROVISIONS

SUBPART B: SOLID WASTE PERMITS

SUBPART C: SANITARY LANDFILLS

SUBPART E: CLOSURE AND POST-CLOSURE CARE

SUBPART F: FINANCIAL ASSURANCE FOR CLOSURE AND POSTCLOSURE CARE

Illustration D Performance Bond
Illustration E Irrevocable Standby Letter of Credit
Illustration F Certificate of Insurance for Closure and/or Postclosure Care
Illustration G Operator's Bond Without Surety
Illustration H Operator's Bond With Parent Surety
Illustration I Letter from Chief Financial Officer

807.Appendix B Old Rule Numbers Referenced

AUTHORITY: Implementing Sections 5, 21.1 and 22 and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, pars. 1005, 1021.1, 1022 and 1027~~ [415 ILCS 5/5, 21.1, 22, and 27]~~)~~.

SOURCE: Adopted as an emergency rule and filed with the Secretary of State July 27, 1973; amended at 2 Ill. Reg. 16, p. 3, effective April 10, 1978; codified at 7 Ill. Reg. 13636; recodified from Subchapter h to Subchapter i at 8 Ill. Reg. 13198; emergency amendment in R84-22A at 9 Ill. Reg. 741, effective January 3, 1985 for a maximum of 150 days; amended in R84-22B at 9 Ill. Reg. 6722, effective April 29, 1985; amended in R84-22C at 9 Ill. Reg. 18942, effective November 25, 1985; amended in R84-45 at 12 Ill. Reg. 15566, effective September 14, 1988; amended in R88-7 at 14 Ill. Reg. 15832, effective September 18, 1990; emergency amendment in R93-25 at 17 Ill. Reg. 17268, effective September 24, 1993 for a maximum of 150 days; amended in R90-26 at 18 Ill. Reg. 12451, effective August 1, 1994; amended in R96-1 at Ill. Reg. , effective .

NOTE: Capitalization denotes statutory language.

SUBPART A: GENERAL PROVISIONS

Section 807.105 Relation to Other Rules

a) Persons and facilities regulated pursuant to 35 Ill. Adm. Code 700 through 749 are not subject to the requirements of this Part or of 35 Ill. Adm. Code 811 through ~~815 and~~ 817. However, if such a facility also contains one or more units used solely for the disposal of solid wastes, as defined in 35 Ill. Adm. Code 810.103, such units are subject to requirements of this Part and 35 Ill. Adm. Code 811 through ~~815 and~~ 817.

b) Persons and facilities subject to 35 Ill. Adm. Code 807, 809 or 811 through ~~815 or~~ 817 may be subject to other applicable Parts of 35 Ill. Adm. Code: Chapter I based on the language of those other Parts. Specific examples of such applicability are provided as explained at 35 Ill. Adm. Code 700.102.

c) The requirements of 35 Ill. Adm. Code 810 through ~~815~~

~~and~~ 817 are intended to supersede the requirements of this Part. Persons and facilities regulated pursuant to 35 Ill. Adm. Code 810 through ~~815 and~~ 817 are not subject to the requirements of this Part. This Part does not apply to new units as defined in 35 Ill. Adm. Code 810.103.

(Source: Amended at 19 Ill. Reg. _____, effective _____ _____)

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

PART 810
SOLID WASTE DISPOSAL: GENERAL PROVISIONS

Section
810.101 Scope and Applicability
810.102 Severability
810.103 Definitions
810.104 Incorporations by Reference

AUTHORITY: Implementing Sections 5, 21, 21.1, 22 and 22.17, and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, pars. 1005, 1021, 1021.1, 1022, 1022.17 and 1027)~~ [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1 and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15838, effective September 18, 1990; amended in R93-10 at 18 Ill. Reg. 1268, effective January 13, 1994; amended in R90-26 at 18 Ill. Reg. 12457, effective August 1, 1994; amended in R96-1 at Ill. Reg. , effective .

NOTE: Capitalization indicates statutory language.

Section 810.101 Scope and Applicability

This Part applies to all solid waste disposal facilities regulated pursuant to 35 Ill. Adm. Code 811 through ~~815 and~~ 817. This Part does not apply to hazardous waste management facilities regulated pursuant to 35 Ill. Adm. Code 700 through 750.

(Source: Amended at 19 Ill. Reg. _____, effective _____)

Section 810.102 Severability

If any provision of this Part or of 35 Ill. Adm. Code 811 through 81~~5~~7 or its application to any person or under any circumstances is adjudged invalid, such adjudication shall not affect the validity of this Part or of 35 Ill. Adm. Code 811 through 81~~5~~7 as a whole or of any portion not adjudged invalid.

(Source: Amended at 19 Ill. Reg. _____, effective _____)

Section 810.103 Definitions

Except as stated in this Section, or 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 that applied to the same words or terms in the Environmental Protection Act (Act) ~~(Ill. Rev. Stat. 1991, ch. 111½, pars. 1001 et. seq.)~~ [415 ILCS 5 et. seq.]:

"Act" means the Environmental Protection Act, Ill. Rev. Stat. 1991, ch. 111½, pars. 1001 et. seq [415 ILCS 5].

"AGENCY" IS THE ENVIRONMENTAL PROTECTION AGENCY ESTABLISHED BY THE ENVIRONMENTAL PROTECTION ACT. (Section 3.08 of the Act.)

"Admixtures" are chemicals added to earth materials to improve for a specific application the physical or chemical properties of the earth materials. Admixtures include, but are not limited to: lime, cement, bentonite and sodium silicate.

"Applicant" means the person, submitting an application to the Agency for a permit for a solid waste disposal facility.

"AQUIFER" MEANS SATURATED (WITH GROUNDWATER) SOILS AND GEOLOGIC MATERIALS WHICH ARE SUFFICIENTLY PERMEABLE TO READILY YIELD ECONOMICALLY USEFUL QUANTITIES OF WATER TO WELLS, SPRINGS, OR STREAMS UNDER ORDINARY HYDRAULIC GRADIENTS and whose boundaries can be identified and mapped from hydrogeologic data. (Section 3 of the Illinois Groundwater Protection Act ~~(Ill. Rev. Stat. 1989, ch. 111 1/2, par. 7453)~~ [415 ILCS 55/3].)

"Bedrock" means the solid rock formation immediately underlying any loose superficial material such as soil, alluvium or glacial drift.

"Beneficially usable waste" means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents that exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

"BOARD" IS THE POLLUTION CONTROL BOARD ESTABLISHED BY THE ACT. (Section 3.04 of the Act.)

"Borrow area" means an area from which earthen material is excavated for the purpose of constructing daily

cover, final cover, a liner, a gas venting system, roadways or berms.

"Chemical waste" means a non-putrescible solid whose characteristics are such that any contaminated leachate is expected to be formed through chemical or physical processes, rather than biological processes, and no gas is expected to be formed as a result.

"Coal combustion power generating facilities" mean establishments classified by Standard Industrial Classification (SIC) codes 4911 and 4931 which generate electricity by combusting coal.

"Contaminated leachate" means any leachate whose constituent violate the standards of 35 Ill. Adm. Code 811.202.

"Design Period" means that length of time determined by the sum of the operating life of the solid waste landfill facility plus the postclosure care period necessary to stabilize the waste in the units.

"DISPOSAL" MEANS THE DISCHARGE, DEPOSIT, INJECTION, DUMPING, SPILLING, LEAKING OR PLACING OF ANY SOLID WASTE INTO OR ON ANY LAND OR WATER OR INTO ANY WELL SUCH THAT SOLID WASTE OR ANY CONSTITUENT OF THE SOLID WASTE MAY ENTER THE ENVIRONMENT BY BEING EMITTED INTO THE AIR OR DISCHARGED INTO ANY WATERS, INCLUDING GROUNDWATER. (Section 3.08 of the Act.) If the solid waste is accumulated and not confined or contained to prevent its entry into the environment, or there is no certain plan for its disposal elsewhere, such accumulation shall constitute disposal.

"Disturbed areas" means those areas within a facility that have been physically altered during waste disposal operations or during the construction of any part of the facility.

"Documentation" means items, in any tangible form, whether directly legible or legible with the aid of any machine or device, including but not limited to affidavits, certificates, deeds, leases, contracts or other binding agreements, licenses, permits, photographs, audio or video recordings, maps, geographic surveys, chemical and mathematical formulas or equations, mathematical and statistical calculations and assumptions, research papers, technical reports, technical designs and design drawings, stocks, bonds and financial records, that are used to support facts or hypotheses.

"Earth liners" means structures constructed from naturally occurring soil material that has been compacted to achieve a low permeability.

"Existing facility" or "Existing unit" means a facility or unit which is not defined in this Section as a new facility or a new unit.

"EXISTING MSWLF UNIT" MEANS ANY MUNICIPAL SOLID WASTE LANDFILL UNIT THAT HAS RECEIVED HOUSEHOLD WASTE BEFORE OCTOBER 9, 1993. (Section 3.87 of the Act)

"Facility" means a site and all equipment and fixtures on a site used to treat, store or dispose of solid or special wastes. A facility consists of an entire solid or special waste treatment, storage or disposal operation. All structures used in connection with or to facilitate the waste disposal operation shall be considered a part of the facility. A facility may include, but is not limited to, one or more solid waste disposal units, buildings, treatment systems, processing and storage operations, and monitoring stations.

"Field capacity" means that maximum moisture content of a waste, under field conditions of temperature and pressure, above which moisture is released by gravity drainage.

"Foundry sand" means pure sand or a mixture of sand and any additives necessary for use of the sand in the foundry process, but does not include such foundry process by-products as air pollution control dust or refractories.

"Gas collection system" means a system of wells, trenches, pipes and other related ancillary structures such as manholes, compressor housing, and monitoring installations that collects and transports the gas produced in a putrescible waste disposal unit to one or more gas processing points. The flow of gas through such a system may be produced by naturally occurring gas pressure gradients or may be aided by an induced draft generated by mechanical means.

"Gas condensate" means the liquid formed as a landfill gas is cooled or compressed.

"Gas venting system" means a system of wells, trenches, pipes and other related structures that vents the gas produced in a putrescible waste disposal unit to the atmosphere.

"Geomembranes" means manufactured membrane liners and barriers of low permeability used to control the migration of fluids or gases.

"Geotextiles" are permeable manufactured materials used for purposes which include, but are not limited to, strengthening soil, providing a filter to prevent clogging of drains, collecting and draining liquids and gases beneath the ground surface.

"GROUNDWATER" MEANS UNDERGROUND WATER WHICH OCCURS WITHIN THE SATURATED ZONE AND WITHIN GEOLOGIC MATERIALS WHERE THE FLUID PRESSURE IN THE PORE SPACE IS EQUAL TO OR GREATER THAN ATMOSPHERIC PRESSURE. (Section 3 of the Illinois Groundwater Protection Act)

"HOUSEHOLD WASTE" MEANS ANY SOLID WASTE (INCLUDING GARBAGE, TRASH, AND SANITARY WASTE IN SEPTIC TANKS) DERIVED FROM HOUSEHOLDS (INCLUDING SINGLE AND MULTIPLE RESIDENCES, HOTELS AND MOTELS, BUNKHOUSES, RANGER STATIONS, CREW QUARTERS, CAMPGROUNDS, PICNIC GROUNDS, AND DAY-USE RECREATION AREAS). (Section 3.89 of the Act)

"Hydraulic barriers" means structures designed to prevent or control the seepage of water. Hydraulic barriers include, but are not limited to cutoff walls, slurry walls, grout curtains and liners.

"Inert waste" means any solid waste that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a contaminated leachate, as determined in accordance with Section 811.202(b). Such inert wastes shall include only non-biodegradable and non-putrescible solid wastes. Inert wastes may include, but are not limited to, bricks, masonry and concrete (cured for 60 days or more).

"Iron slag" means slag.

"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. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a land application unit is not a landfill; however, other Parts of 35 Ill. Adm. Code: Chapter I may apply, and may include the permitting requirements of 35 Ill. Adm. Code 309.

"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. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, landfills include waste piles, as defined in this Section.

"LATERAL EXPANSION" MEANS A HORIZONTAL EXPANSION OF THE ACTUAL WASTE BOUNDARIES OF AN EXISTING MSWLF UNIT OCCURRING ON OR AFTER OCTOBER 9, 1993. FOR PURPOSES OF THIS SECTION, A HORIZONTAL EXPANSION IS ANY AREA WHERE SOLID WASTE IS PLACED FOR THE FIRST TIME DIRECTLY UPON THE BOTTOM LINER OF THE UNIT, EXCLUDING SIDE SLOPES ON OR AFTER OCTOBER 9, 1993. (Section 3.88 Of the Act)

"Leachate" means liquid that has been or is in direct contact with a solid waste.

"Lift" means an accumulation of waste which is compacted into a unit and over which cover is placed.

"Low risk waste" means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents that exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

"Malodor" means an odor caused by ONE OR MORE CONTAMINANT EMISSIONS INTO THE ATMOSPHERE FROM A FACILITY THAT IS IN SUFFICIENT QUANTITIES AND OF SUCH CHARACTERISTICS AND DURATION AS TO BE described as malodorous and which may be INJURIOUS TO HUMAN, PLANT, OR ANIMAL LIFE, TO HEALTH, OR TO PROPERTY, OR TO UNREASONABLY INTERFERE WITH THE ENJOYMENT OF LIFE OR PROPERTY. (Section 3.02 of the Act (defining "air pollution").)

"MUNICIPAL SOLID WASTE LANDFILL UNIT" OR "MSWLF UNIT" MEANS A CONTIGUOUS AREA OF LAND OR AN EXCAVATION THAT RECEIVES HOUSEHOLD WASTE, AND THAT IS NOT A LAND APPLICATION, SURFACE IMPOUNDMENT, INJECTION WELL, OR ANY PILE OF NONCONTAINERIZED ACCUMULATIONS OF SOLID, NONFLOWING WASTE THAT IS USED FOR TREATMENT OR STORAGE. A MSWLF UNIT MAY ALSO RECEIVE OTHER TYPES OF RCRA SUBTITLE D WASTES, SUCH AS COMMERCIAL SOLID WASTE, NONHAZARDOUS SLUDGE, SMALL QUANTITY GENERATOR WASTE AND INDUSTRIAL SOLID WASTE. SUCH A LANDFILL MAY BE PUBLICLY OR PRIVATELY OWNED OR OPERATED. A MSWLF UNIT MAY BE A NEW MSWLF UNIT, AN EXISTING MSWLF UNIT OR A LATERAL EXPANSION. A SANITARY LANDFILL IS SUBJECT TO REGULATION AS A MSWLF IF IT RECEIVES HOUSEHOLD WASTE. (Section 3.85 of the Act)

"National Pollutant Discharge Elimination System" or "NPDES" means the program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under the Clean Water Act (33 U.S.C. 1251 et seq.), Section 12(f) of the Environmental Protection Act and 35 Ill. Adm. Code 309.Subpart A and 310. "NPDES permit" means a permit issued under the NPDES program.

"New facility" or "New unit" means a solid waste landfill facility or a unit at a facility, if one or more of the following conditions apply:

It is a landfill or unit exempt from permit requirements pursuant to Section 21(d) of the Act that has not yet accepted any waste as of September 18, 1990;

It is a landfill or unit not exempt from permit requirements pursuant to Section 21(d) of the Act that has no development or operating permit issued by the Agency pursuant to 35 Ill. Adm. Code 807 as of September 18, 1990; or

It is a landfill with a unit whose maximum design capacity or lateral extent is increased after September 18, 1990.

BOARD NOTE: A new unit located in an existing facility shall be considered a unit subject to 35 Ill. Adm. Code 814, which references applicable requirements of 35 Ill. Adm. Code 811.

"NEW MSWLF UNIT" MEANS ANY MUNICIPAL SOLID WASTE LANDFILL UNIT THAT HAS RECEIVED HOUSEHOLD WASTE ON OR AFTER OCTOBER 9, 1993 FOR THE FIRST TIME. (Section 3.86 of the Act)

"One hundred (100) year flood plain" means any land area which is subject to a one percent or greater chance of flooding in a given year from any source.

"One hundred (100) year, 24 hour precipitation event" means a precipitation event of 24 hour duration with a probable recurrence interval of once in 100 years.

"Operator" means the person responsible for the operation and maintenance of a solid waste disposal facility.

"Owner" means a person who has an interest, directly or

indirectly, in land, including a leasehold interest, on which a person operates and maintains a solid waste disposal facility. The "owner" is the "operator" if there is no other person who is operating and maintaining a solid waste disposal facility.

"Perched watertable " means an elevated watertable above a discontinuous saturated lens, resting on a low permeability (such as clay) layer within a high permeability (such as sand) formation.

"Permit area" means the entire horizontal and vertical region occupied by a permitted solid waste disposal facility.

"PERSON" IS ANY INDIVIDUAL, PARTNERSHIP, CO-PARTNERSHIP, FIRM, COMPANY, CORPORATION, ASSOCIATION, JOINT STOCK COMPANY, TRUST, ESTATE, POLITICAL SUBDIVISION, STATE AGENCY, OR ANY OTHER LEGAL ENTITY, OR THEIR LEGAL REPRESENTATIVE, AGENT OR ASSIGNS. (Section 3.26 of the Act.)

"Potentially usable waste" means any solid waste from the steel and foundry industries that will not decompose biologically, burn, serve as food for vectors, form a gas, cause an odor, or form a leachate that contains constituents that exceed the limits for this type of waste as specified at 35 Ill. Adm. Code 817.106.

"Poz-O-Tec materials" means materials produced by a stabilization process patented by Conversion Systems, Inc. utilizing flue gas desulfurization (FGD) sludges and ash produced by coal combustion power generation facilities as raw materials.

"Poz-O-Tec monofill" means a landfill in which solely Poz-O-Tec materials are placed for disposal.

"Professional engineer" means a person who has registered and obtained a seal pursuant to "The Illinois Professional Engineering Practice Act of 1989" ~~(Ill. Rev. Stat 1989, ch. 111, par. 5101 et seq.)~~ [225 ILCS 325/1 set seq.].

"Professional land surveyor" means a person who has received a certificate of registration and a seal pursuant to "Illinois Professional ~~The~~ Land Surveyor~~s~~ Act of 1989" ~~(Ill. Rev. Stat. 1989, ch. 111, par. 3201 et seq.)~~ [225 ILCS 330/1 et seq.].

"Putrescible waste" means a solid waste that contains

organic matter capable of being decomposed by microorganisms so as to cause a malodor, gases, or other offensive conditions, or which is capable of providing food for birds and vectors. Putrescible wastes may form a contaminated leachate from microbiological degradation, chemical processes, and physical processes. Putrescible waste includes, but is not limited to, garbage, offal, dead animals, general household waste, and commercial waste. All solid wastes which do not meet the definitions of inert or chemical wastes shall be considered putrescible wastes.

"Publicly owned treatment works" or "POTW" means a treatment works that is owned by the State of Illinois or a unit of local government. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastewater. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant. The term also means the unit of local government which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

"RESOURCE CONSERVATION RECOVERY ACT" "RCRA" MEANS THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 (P.L. 94-580 Codified as 42 USC. §§ 6901 et seq.) AS AMENDED. (Section 3.90 of the Act)

"Recharge zone" means an area through which water can enter an aquifer.

"Responsible charge," when used to refer to a person, means that the person is normally present at a waste disposal site; directs the day-to-day overall operation at the site; and either is the owner or operator or is employed by or under contract with the owner or operator to assure that the day-to-day operations at the site are carried out in compliance with any Part of 35 Ill. Adm. Code: Chapter I governing operations at waste disposal sites.

"Runoff" means water resulting from precipitation that flows overland before it enters a defined stream channel, any portion of such overland flow that infiltrates into the ground before it reaches the stream channel, and any precipitation that falls directly into a stream channel.

"Salvaging" means the return of waste materials to use, under the supervision of the landfill operator, so long as the activity is confined to an area remote from the

operating face of the landfill, it does not interfere with or otherwise delay the operations of the landfill, and it results in the removal of all materials for salvaging from the landfill site daily or separates them by type and stores them in a manner that does not create a nuisance, harbor vectors or cause an unsightly appearance.

"Scavenging" means the removal of materials from a solid waste management facility or unit which is not salvaging.

"Seismic Slope Safety Factor" means the ratio between the resisting forces or moments in a slope and the driving forces or moments that may cause a massive slope failure during an earthquake or other seismic event such as an explosion.

"Settlement" means subsidence caused by waste loading, changes in groundwater level, chemical changes within the soil and adjacent operations involving excavation.

"Shredding" means the mechanical reduction in particle sizes of solid waste. Putrescible waste is considered shredded if 90 percent of the waste by dry weight passes a 3 inch sieve.

"Significant Modification" means a modification to an approved permit issued by the Agency in accordance with Section 39 of the Act and 35 Ill. Adm. Code 813 that is required when one or more of the following changes, considered significant when that change measured by one or more parameters whose values lie outside the expected operating range of values as specified in the permit, are planned, occur or will occur:

An increase in the capacity of the waste disposal unit over the permitted capacity;

Any change in the placement of daily, intermediate or final cover;

A decrease in performance, efficiency or longevity of the liner system;

A decrease in efficiency or performance of the leachate collection system;

A change in configuration, performance, or efficiency of the leachate management system;

A change in the final disposition of treated

effluent or in the quality of the discharge from the leachate treatment or pretreatment system;

Installation of a gas management system, or a decrease in the efficiency or performance of an existing gas management system;

A change in the performance or operation of the surface water control system;

A decrease in the quality or quantity of data from any environmental monitoring system;

A change in the applicable background concentrations or the maximum allowable predicted concentrations;

A change in the design or configuration of the regraded area after development or after final closure;

A change in the amount or type of postclosure financial assurance;

Any change in the permit boundary;

A change in the postclosure land use of the property;

A remedial action necessary to protect groundwater;

Transfer of the permit to a new operator;

Operating authorization is being sought to place into service a structure constructed pursuant to a construction quality assurance program; or

A change in any requirement set forth as a special condition in the permit.

"Slag" means the fused agglomerate which separates in the iron and steel production and floats on the surface of the molten metal.

"Sole source aquifer" means those aquifers designated pursuant to Section 1424(e) of the Safe Drinking Water Act of 1974, (42 U.S.C 300h-3).

"Solid Waste" means a waste that is defined in this Section as an inert waste, as a putrescible waste, as a chemical waste or as a special waste, and which is not

also defined as a hazardous waste pursuant to 35 Ill. Adm. Code 721.

"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.)

"Static Safety Factor" means the ratio between resisting forces or moments in a slope and the driving forces or moments that may cause a massive slope failure.

"Steel slag" means slag.

"Surface impoundment" means a natural topographic depression, a man-made excavation, or a diked area into which flowing wastes, such as liquid wastes or wastes containing free liquids, are placed. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a surface impoundment is not a landfill. Other Parts of 35 Ill. Adm. Code: Chapter I may apply, including the permitting requirements of 35 Ill. Adm. Code 309.

"Twenty-five (25) year, 24 hour precipitation event" means a precipitation event of 24 hour duration with a probable recurrence interval of once in 25 years.

"Uppermost aquifer" means the first geologic formation above or below the bottom elevation of a constructed liner or wastes, where no liner is present, which is an aquifer, and includes any lower aquifer that is hydraulically connected with this aquifer within the facility's permit area.

"Unit" means a contiguous area used for solid waste disposal.

"Unit of local government" means a unit of local government, as defined by Article 7, Section 1 of the Illinois Constitution. A unit of local government may include, but is not limited to, a municipality, a county, or a sanitary district.

"Waste pile" means an area on which non-containerized masses of solid, non flowing wastes are placed for disposal. For the purposes of this Part and 35 Ill. Adm. Code 811 through 815, a waste pile is a landfill, unless the operator can demonstrate that the wastes are not accumulated over time for disposal. At a 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.

"Waste stabilization" means any chemical, physical or thermal treatment of waste, either alone or in combination with biological processes, which results in a reduction of microorganisms, including viruses, and the potential for putrefaction.

"Working face" means any part of a landfill where waste is being disposed.

"Zone of attenuation" is the three dimensional region formed by excluding the volume occupied by the waste placement from the smaller of the volumes resulting from vertical planes drawn to the bottom of the uppermost aquifer at the property boundary or 100 feet from the edge of one or more adjacent units.

(Source: Amended at 19 Ill. Reg. _____, effective _____ _____)

Section 810.104 Incorporations by Reference

a) The Board incorporates the following material by reference:

1) Code of Federal Regulations:

40 CFR 141.40 (1988).

40 CFR 258.Appendix II (1992).

2) American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York NY 10036:

Auditing Standards--Current Text, August 1, 1990 Edition.

3) ASTM. American Society for Testing and Materials, 1976 Race Street, Philadelphia PA 19103 (215) 299-5585:

Method D2234-76, Test Method for Collection of Gross Samples of Coal.

Method D3987-85, Standard Test Method for Shake Extraction of Solid Waste with Water.

Method D5102, Standard Test Method for

Unconfined Compressive Strength of Cohesive Soils.

4) U.S. Government Printing Office, Washington, D.C. 20402, Ph: (202) 783-3238:

Test Methods for Evaluating Solid Waste, Physical/Chemical methods, EPA Publication SW-846 (Third Edition, 1986 as amended by Update I (November, 1990)

5) U.S. Army Corps of Engineers, Publication Department, 2803 52nd Ave., Hyattvile, Maryland 20781, Ph. (301) 394-0081:

Engineering Manual 1110-2-1906 Appendix VII, Falling-Head Permeability Test with Permeameter Cylinder.

b) This incorporation includes no later amendments or editions.

(Source: Amended at 19 Ill. Reg. _____, effective _____ _____)

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

PART 811
STANDARDS FOR NEW SOLID WASTE LANDFILLS

SUBPART A: GENERAL STANDARDS FOR ALL LANDFILLS

Section
811.101 Scope and Applicability
811.102 Location Standards
811.103 Surface Water Drainage
811.104 Survey Controls
811.105 Compaction
811.106 Daily Cover
811.107 Operating Standards
811.108 Salvaging
811.109 Boundary Control
811.110 Closure and Written Closure Plan
811.111 Postclosure Maintenance

SUBPART B: INERT WASTE LANDFILLS

Section
811.201 Scope and Applicability
811.202 Determination of Contaminated Leachate
811.203 Design Period
811.204 Final Cover
811.205 Final Slope and Stabilization
811.206 Leachate Sampling
811.207 Load Checking

SUBPART C: PUTRESCIBLE AND CHEMICAL WASTE LANDFILLS

Section
811.301 Scope and Applicability
811.302 Facility Location
811.303 Design Period
811.304 Foundation and Mass Stability Analysis
811.305 Foundation Construction
811.306 Liner Systems
811.307 Leachate Drainage System
811.308 Leachate Collection System
811.309 Leachate Treatment and Disposal System
811.310 Landfill Gas Monitoring
811.311 Landfill Gas Management System
811.312 Landfill Gas Processing and Disposal System
811.313 Intermediate Cover

SUBPART D: MANAGEMENT OF SPECIAL WASTES AT LANDFILLS

SUBPART E: CONSTRUCTION QUALITY ASSURANCE PROGRAMS

SUBPART G: FINANCIAL ASSURANCE

AUTHORITY: Implementing Sections 5, 21, 21.1, 22, 22.17 and 28.1 and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111½, pars. 1005, 1021, 1021.1, 1022, 1022.17, 1028.1 and 1027)~~ [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1 and 27].

SOURCE: Adopted in R88-7 at 14 Ill. Reg. 15861, effective September 18, 1990; amended in R92-19 at 17 Ill. Reg. 12413, effective July 19, 1993; amended in R93-10 at 18 Ill. Reg. 1308, effective January 13, 1994; expedited correction at 18 Ill. Reg. 7504, effective July 19, 1993; amended in R90-26 at 18 Ill. Reg. 12481, effective August 1, 1994; amended in R96-1 at Ill. Reg. , effective .

NOTE: Capitalization indicates statutory language.

SUBPART A: GENERAL STANDARDS FOR ALL LANDFILLS

Section 811.101 Scope and Applicability

a) The standards of this Part apply to all new landfills, except as otherwise provided in 35 Ill. Adm. Code 816 and 817, and except those regulated pursuant to 35 Ill. Adm. Code 700 through 749. Subpart A contains general standards applicable to all new landfills. Subpart B contains additional standards for new landfills which dispose of only inert wastes. Subpart C contains additional standards for new landfills which dispose of chemical and putrescible wastes.

b) All general provisions of 35 Ill. Adm. Code 810 apply to this Part.

c) Standards for Municipal Solid Waste landfills

1) The standards of this Part also apply to all new MSWLF units, as defined at 35 Ill. Adm. Code 810.103. The standards for the new MSWLF units include:

A) The standards applicable to new landfills pursuant to subsection (a); and

B) The standards adopted in this part that are identical-in-substance to the federal regulations promulgated by the U.S. Environmental Protection Agency pursuant Sections 4004 and 4010 of the RCRA relating to MSWLF program. Such standards are individually indicated as applicable to MSWLF units.

2) The Appendix Table 811.Appendix B provides a Section-by-Section correlation between the requirements of the federal MSWLF regulations at 40 CFR 258 (1992) and the requirements of this Part.

3) An owner or operator of a MSWLF unit shall also comply with any other applicable Federal rules, laws, regulations, or other requirements.

BOARD NOTE: Subsection (c)(3) is derived from 40 CFR 258.3 (1992).

(Source: Amended at 19 Ill. Reg. _____, effective _____ _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: WASTE DISPOSAL
SUBCHAPTER i: SOLID WASTE AND SPECIAL WASTE HAULING

PART 816

ALTERNATIVE STANDARDS FOR NEW UTILITY WASTE LANDFILLS

SUBPART A: STANDARDS FOR POZ-O-TEC LINERS AND CAPS AND POZ-O-TEC MONOFILLS

Section
816.500 Scope and Applicability
816.510 Poz-O-Tec Liners and Caps
816.520 Poz-O-Tec Monofills
816.530 Testing of Poz-O-Tec Liners and Caps, and Poz-O-Tec Monofills

AUTHORITY: Implementing Sections 5, 21, 21.1, 22, 22.17 and 28.1 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 21.1, 22, 22.17, 28.1 and 27].

SOURCE: Adopted in R96- at 19 Ill. Reg. , effective .

SUBPART A: STANDARDS FOR POZ-O-TEC LINERS AND CAPS AND POZ-O-TEC MONOFILLS

Section 816.500 Scope and Applicability

a) Except as otherwise specified in this Subpart, landfills receiving solely flue gas desulfurization (FGD) sludges and coal combustion wastes produced by coal combustion power generating facilities utilizing a lime or limestone scrubber system shall be designed, constructed and operated in compliance with all applicable requirements of 35 Ill. Adm. Code Parts 811, 812 and 815.

b) All general provisions of 35 Ill. Adm. Code 810 apply to this Part.

Section 816.510 Poz-O-Tec Liners and Caps

Notwithstanding the liner and cap requirements set forth at 35 Ill. Adm. Code 811.306, 811.314 (solely to the extent that it may preclude Poz-O-Tec materials from being used as a landfill cap or liner) and 811.507(a)(5), FGD sludges and coal combustion waste produced by coal combustion power generating facilities utilizing a lime or limestone scrubber system may be used for liner or cap construction for the purposes of Subpart C of Part 811, provided that:

a) These raw FGD sludges and coal combustion wastes have been processed into Poz-O-Tec materials;

b) The permeability of the liner constructed of Poz-O-Tec material is demonstrated to be less than or equal to 1 x 10^{-7} cm/sec after placement and curing based upon a geometric average of the permeability testing results prior to the placement of any waste upon the liner;

c) The Poz-O-Tec material has an unconfirmed compressive strength of greater than or equal to 150 psi based upon an arithmetic average of the strength testing results obtained in accordance with Subpart M of Section 816.530;

d) The bottom liner has a minimum thickness of three (3) feet but this thickness may be increased as necessary to make the demonstrations required by 35 Ill. Adm. Code Parts 812 or 815;

e) The base of the liner is constructed at least five feet above the average historical groundwater table;

f) Only coal combustion wastes and FGD sludges produced from power generating facilities utilizing lime or limestone scrubber systems are placed into the landfill;

g) A final cover system is installed in accordance with the requirements of 35 Ill. Adm. Code 811.314 except that the low permeability layer of the cap shall consist of Poz-O-Tec materials which are at least three feet thick;

h) The material testing procedures specified in Section 816.530 are implemented;

i) The landfill is designed, constructed and operated in compliance with all applicable requirements of 35 Ill. Adm. Code Parts 811, 812 and 815;

j) The bottom liner and low permeability layer of the cap are constructed according to a construction quality assurance program in accordance with 35 Ill. Adm. Code 811, Subpart E;

k) An acceptable groundwater impact assessment pursuant to 35 Ill. Adm. Code 811.317(b), 812.316, 813.304, or 815.203, as appropriate for the given facility is submitted to the Agency by the owner or operator;

l) A test liner is constructed by the owner or operator, such that all that remains is the curing of the test liner, before construction of the actual full-scale liner of Poz-O-Tec material may commence, in accordance with 35 Ill. Adm. Code 811.507(a)(1) through 811.507(a)(4). The test liner must be fully evaluated in accordance with Section 816.530 and the results must be provided to the Agency. If the test liner evaluation results indicate a failure of the test liner to meet any of the performance standards in this Section, and if the Agency so directs, the user must excavate and properly dispose of all Poz-O-Tec liners at the site, as well as any waste deposited in and around such liners; and

m) Owners or operators using Poz-O-Tec materials in accordance with this Section shall comply with the Illinois Environmental Protection Act (415 ILCS 5/1 et seq.) and 35 Ill. Adm. Code Parts 807, 810, and 811, to the extent those provisions are not otherwise addressed herein.

Section 816.520 Poz-O-Tec Monofills

Any monofill receiving solely FGD sludges and coal combustion wastes produced by coal combustion power generating facilities utilizing a lime or limestone scrubber system shall be exempt from the requirements of 35 Ill. Adm. Code 811.105 (solely as it relates to the placement of wastes at the lowest part of the active face), 811.306, 811.307, 811.308, 811.309, 811.313 (solely as they relate to soil cover), 811.314(b)(3)(C) (solely to the extent that it may preclude Poz-O-Tec materials from being used as a landfill cap) and 811.321 (relating solely to waste placement), provided that:

a) The FGD sludges and coal combustion wastes have been processed into Poz-O-Tec materials;

b) The permeability of the liner constructed of Poz-O-Tec material is demonstrated to be less than or equal to 1 x 10^{-7} cm/sec after placement and curing based upon a geometric average of those cylinders tested for permeability which were formed from a single sample in accordance with Section 816.530(b);

c) The Poz-O-Tec material has an unconfined compressive strength of greater than or equal to 150 psi using an arithmetic average of the strength testing results obtained in accordance with Section 816.530;

d) The base of the monofill is constructed at least five

feet above the average historical groundwater table.

e) A monofill liner and low permeability cap is constructed from the Poz-O-Tec materials as described in Section 816.510;

f) A drainage layer is constructed atop the monofill liner which has a permeability greater than or equal to 1 x 10^{-3}cm/sec which extends over the entire liner system of the monofill;

g) The material is placed in such a manner that it will form a monolithic block through placement of the material in one to two foot lifts, which are compacted, rolled to smooth and graded and sloped such that any rainfall rapidly runs off the upper surface without puddling;

h) At all times a berm is maintained around three sides of the landfill mass and the grading is such that the run-off is directed toward the open side where it is collected for reuse or treated (if necessary) and discharged pursuant to an NPDES permit;

i) The material testing procedures specified in Section 816.530 are implemented;

j) Construction of the full scale monofill may commence immediately upon completion of the test pad;

k) An acceptable groundwater impact assessment pursuant to 35 Ill. Adm. Code 811.371(b), 812.316, 813.304, or 815.203, as appropriate for the given facility is prepared; and

l) Owners or operators using the Poz-O-Tec materials in accordance with this section shall comply with the Illinois Environmental Protection Act (415 ILCS 5/1 et seq.) and 35 Ill. Adm. Code 811, to the extent those provisions are not otherwise addressed herein.

Section 816.530 Testing of Poz-O-Tec Liners and Caps, and Poz-O-Tec Monofills

The owner or operator shall implement the following material testing procedures for testing Poz-O-Tec liners and caps, and Poz-O-Tec Monofills:

a) Creation and Sampling of Test Pad

1) The owner or operator shall construct a test pad

in accordance with 35 Ill. Adm. Code 811.507(a), unless such construction is waived by the Agency pursuant to subsection(b) of that section;

2) The test pad shall be allowed to cure for 56 days at 73° Fahrenheit (or equivalent cure);

3) After curing, fifty samples shall be taken using a 4 inch diameter coring bit; and

4) The specimens shall be trimmed to proctor cylinder size utilizing an abrasive blade masonry saw, and tested for unconfined compressive strength and coefficient of permeability as described in subsection C, below. Of the specimens taken from the pad, twenty shall be analyzed for their coefficient of permeability and thirty shall be analyzed for their unconfined compressive strength.

b) Collection of Production Samples

The owner or operator shall collect samples from the production of Poz-O-Tec in the following manner:

1) Utilizing a large scoop, five gallon buckets of freshly produced material shall be collected at uniform intervals during construction of the test pad and shipped to a laboratory for analysis.

2) Five proctor cylinder specimens shall be prepared from each bucket of freshly produced material. Three of these five cylinders shall be tested for unconfined compressive strength and the other two shall be tested for permeability.

3) Additional uncured samples shall be taken as necessary for preparation and testing to determine moisture content, lime content, the ratio of fly ash to sludge and in-place density. Testing for these parameters shall be conducted in accordance with standard test methods.

c) Strength and Permeability Testing

1) Uncured samples shall be taken to a laboratory, placed into proctor cylinders, compacted to simulate field conditions, cured in sealed containers for 56 days at 73° (or equivalent cure) and tested for coefficient of permeability and unconfined strength using the following test

methods, which are incorporated by reference in 35 Ill. Adm. Code 810.104:

i) U.S. Army Corps of Engineers Engineering Manual 1110-2-1906 Appendix Vii, Falling-Heal Permeability Test with Permeameter Cylinder.

ii) ASTM Method D5102; Standard Method for Unconfined Compressive Strength of Cohesive Soils.

2) ~~Field samples shall be tested using the same~~ methods as specified in subsection (b)(1), above.

d) Data Correlation

Laboratory data and field data shall be compared to determine any statistically significant differences using standard statistical correlation methodologies.

e) Subsequent Testing

Upon completion of field verification, as described above in (c)(2), the owner or operator of the site shall conduct quality control/quality assurance testing by taking monthly samples of freshly produced Poz-O-Tec materials, and sending those samples to a laboratory where they shall be formed into proctor cylinder specimens for testing. Two of those samples shall be tested for their coefficient of permeability, three for unconfined compressive strength, and one each for the parameters set forth in subsection (b)(3), above. Laboratory testing for permeability and strength must be conducted in accordance with the test methods referenced in Section (b)(1). Test results must demonstrate a coefficient of permeability of less than or equal to 1×10^{-7} cm/sec using a geometric average of the permeability testing results, and an unconfined compressive strength of greater than or equal to 150 psi using an arithmetic average of the strength testing results.

IT IS SO ORDERED.

Board Member R.C. Flemal dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 21st day of September, 1995, by a vote of 6-1.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board