ILLINOIS POLLUTION CONTROL BOARD
October 16, 1992

IN THE MATTER OF:	)	
	)	
RCRA UPDATE, USEPA REGULATIONS	)	R92-10
(1/1/92 - 6/30/92)	)	(Identical in Substance
	)	Rules)

Proposal for Public Comment.

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

Pursuant to Section 7.2 and 22.4(a) of the Environmental Protection Act (Act), the Board is proposing to amend the RCRA hazardous waste regulations. The amendments involve 35 Ill. Adm. Code 702, 703, 720, 721, 724, 725, 726 and 728.

Section 22.4 of the Act governs adoption of regulations establishing the RCRA program in Illinois. Section 22.4(a) provides for quick adoption of regulations which are "identical in substance" to federal regulations; Section 22.4(a) provides that Title VII of the Act and Section 5 of the Administrative Procedure Act shall not apply. Because this rulemaking is not subject to Section 5 of the Administrative Procedure Act, it is not subject to first notice or to second notice review by the Joint Committee on Administrative Rules (JCAR). The federal RCRA regulations are found at 40 CFR 260 through 270. This rulemaking updates Illinois' RCRA rules to correspond with federal amendments during the period January 1 through June 30, 1992.

This proposed order is supported by a proposed opinion of this same date. The complete text of the proposed rules is attached to this order and will appear in the Illinois Register, but will not appear in the Opinion volumes. The Board will receive written public comment for 45 days after the date of publication of the proposed rules in the Illinois Register.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above proposed order was adopted on the 16th day of October, 1992, by a vote of 7-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER b: PERMITS

PART 702
RCRA AND UIC PERMIT PROGRAMS

SUBPART A: GENERAL PROVISIONS

SUBPART B: PERMIT APPLICATIONS

SUBPART C: PERMIT CONDITIONS

SUBPART D: ISSUED PERMITS

Section

AUTHORITY: Implementing Section 13 and 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111 1/2, pars. 1013, 1022.4 and 1027).

SOURCE: Adopted in R81-32, 47 PCB 93, at 6 Ill. Reg. 12479, effective as noted in 35 Ill. Adm. Code 700.106; amended in R82-19, at 53 PCB 131, 7 Ill. Reg. 14352, effective as noted in 35 Ill. Adm. Code 700.106; amended in R84-9 at 9 Ill. Reg. 11926, effective July 24, 1985; amended in R85-23 at 10 Ill. Reg. 13274, effective July 29, 1986; amended in R86-1 at 10 Ill. 14083, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6131, effective March 24, 1987; amended in R87-5 at 11 Ill. Reg. 19376, effective November 12, 1987; amended in R87-26 at 12 Ill. Reg. 2579, effective January 15, 1988; amended in R87-29 at 12 Ill. Reg. 6673, effective March 28, 1988; amended in R87-39 at 12 13083, effective July 29, 1988; amended in R89-1 at 13 Ill. Reg. 18452, effective November 13, 1989; amended in R89-2 at 14 Ill. Reg. 3089, effective February 20, 1990; amended in R89-9 at 14 Ill. Reg. 6273, effective April 16, 1990; amended in R92-10 at 16 Ill. Reg. effective

SUBPART D: ISSUED PERMITS

Section 702.181 Effect of a Permit

a) The existence of a RCRA or UIC permit ~~shall~~ does not constitute a defense to a violation of the Environmental Protection Act or this Subtitle, except for development, modification or operation without a permit. However, a permit may be modified, reissued or revoked during its term for cause as set forth in 35 Ill. Adm. Code 703.270 through 703.273 (RCRA) and 35 Ill. Adm. Code 704.261 through 704.263 (UIC) and Section 702.186.

b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations, except as noted in subsection (a).

BOARD NOTE: Derived from 40 CFR 144.35 ~~(1988)~~ (1991) and 40 CFR 270.4 ~~(1988), as amended at 53 Fed. Reg. 37934, September 28, 1988~~ (1991), as amended at 57 Fed. Reg. 3486, January 29, 1992.

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER b: PERMITS

PART 703
RCRA PERMIT PROGRAM

SUBPART A: GENERAL PROVISIONS

SUBPART B: PROHIBITIONS

SUBPART C: AUTHORIZATION BY RULE AND INTERIM STATUS

SUBPART D: APPLICATIONS

SUBPART E: SHORT TERM AND PHASED PERMITS

SUBPART F: PERMIT CONDITIONS OR DENIAL

SUBPART G: CHANGES TO PERMITS

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R82-19, 53 PCB 131, at 7 Ill. Reg. 14289, effective October 12, 1983; amended in R83-24 at 8 Ill. Reg. 206, effective December 27, 1983; amended in R84-9 at 9 Ill. Reg. 11899, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1110, effective January 2, 1987; amended in R85-23 at 10 Ill. Reg. 13284, effective July 28, 1986; amended in R86-1 at 10 Ill. Reg. 14093, effective August 12, 1986; amended in R86-19 at 10 Ill. Reg. 20702, effective December 2, 1986; amended in R86-28 at 11 Ill. Reg. 6121, effective March 24, 1987; amended in R86-46 at 11 Ill. Reg. 13543, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19383, effective November 12, 1987; amended in R87-26 at 12 Ill. Reg. 2584, effective January 15, 1988; amended in R87-39 at 12 Ill. Reg. 13069, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 447, effective December 27, 1988; amended in R89-1 at 13 Ill. Reg. 18477, effective November 13, 1989; amended in R89-9 at 14 Ill. Reg. 6278, effective April 16, 1990; amended in R90-2 at 14 Ill. Reg. 14492, effective August 22, 1990; amended in R90-11 at 15 Ill. Reg. 9616, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14554, effective September 30, 1991; amended in R91-13 at 16 Ill Reg. 9767, effective June 9, 1992; amended in R92-10 at 16 Ill Reg. , effective

SUBPART D: APPLICATIONS

Section 703.203 Surface Impoundments

For facilities that store, treat or dispose of hazardous waste in surface impoundments, except as otherwise provided in 35 Ill. Adm. Code 724.101, the Part B application must include:

a) A list of the hazardous wastes placed or to be placed in each surface impoundment;

b) Detailed plans and an engineering report describing how the surface impoundment is <u>designed and is</u> or will be ~~designed,~~ constructed, operated and maintained to meet the requirements of 35 Ill. Adm. Code <u>724.119,</u> 724.321, <u>724.322 and 724.323,</u> ~~. This submission must address the following items as specified in that Section~~ <u>addressing the following items</u>:

1) The liner system (except for an existing portion of a surface impoundment). If an exemption from the requirement for a liner is sought as provided by 35 Ill. Adm. Code 724.321(b), submit ~~detailed plans and engineering and hydrogeologic reports as appropriate, describing alternate design and~~

~~operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time~~ a copy of the Board order granting an adjusted standard pursuant to 35 Ill. Adm. Code 724.321(b);

2) The double liner and leak (leachate) detection, collection and removal system, if the surface impoundment must meet the requirements of 35 Ill. Adm. Code 724.321(c). If an exemption from the requirements for double liners and a leak detection, collection and removal system or alternative design is sought as provided by 35 Ill. Adm. Code 724.321(d), (e) or (f), submit appropriate information;

3) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

4) The construction quality assurance (CQA) plan if required under 35 Ill. Adm. Code 724.119;

5) Proposed action leakage rate, with rationale, if required under 35 Ill. Adm. Code 724.322, response action plan, if required under 35 Ill. Adm. Code 724.323, and a proposed pump operating level, if required under 35 Ill. Adm. Code 724.326(d)(3);

~~2~~ 6) Prevention of overtopping; and

~~3~~ 7) Structural integrity of dikes;

c) A description of how each surface impoundment, including the double liner system, leak detection system, cover system ~~and cover systems~~ and appurtenances for control of overtopping, will be inspected in order to meet the requirements of 35 Ill. Adm. Code 724.326(a), ~~and~~ (b) and (d). This information ~~should~~ must be included in the inspection plan submitted under Section 703.183(e);

d) A certification by a qualified engineer which attests to the structural integrity of each dike, as required under 35 Ill. Adm. Code 724.326(c). For new units, the owner or operator ~~must~~ shall submit a statement by a qualified engineer that the engineer will provide such a certification upon completion of construction in

accordance with the plans and specifications;

e) A description of the procedure to be used for removing a surface impoundment from service, as required under 35 Ill. Adm. Code 724.327(b) and (c). This information ~~should~~ must be included in the contingency plan submitted under Section 703.183(g);

f) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required under 35 Ill. Adm. Code 724.328(a)(1). For any wastes not to be removed from the unit upon closure, the owner or operator ~~must~~ shall submit detailed plans and an engineering report describing how 35 Ill. Adm. Code 724.328(a)(2) and (b) will be complied with. This information ~~should~~ must be included in the closure plan and, where applicable, the post-closure plan submitted under Section 703.183(m);

g) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how 35 Ill. Adm. Code 724.329 will be complied with;

h) If incompatible wastes, or incompatible wastes and materials, will be placed in a surface impoundment, an explanation of how 35 Ill. Adm. Code 724.330 will be complied with~~.~~ ; and,

i) A waste management plan for hazardous waste numbers F020, F021, F022, F023, F026 and F027 describing how the surface impoundment is or will be designed, constructed, operated and maintained to meet the requirements of 35 Ill. Adm. Code 724.331. This submission must address the following items as specified in that Section:

1) The volume, physical and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2) The attenuative properties of underlying and surrounding soils or other materials;

3) The mobilizing properties of other materials co-disposed with these wastes; and

4) The effectiveness of additional treatment, design or monitoring techniques.

BOARD NOTE: ~~See 40 CFR 270.17~~ Derived from 40 CFR 270.17 (1991), as amended at 57 Fed.

Reg. 3486, January 29, 1992.

(Source: Amended at 16 Ill. Reg. , effective)

Section 703.204 Waste Piles

For facilities that store or treat hazardous waste in waste piles, except as otherwise provided in 35 Ill. Adm. Code 724.101, the Part B application must include:

a) A list of hazardous wastes placed or to be placed in each waste pile;

b) If an exemption is sought to 35 Ill. Adm Code 724.351 and 724.Subpart F as provided by 35 Ill. Adm. Code 724.350(c) or 724.190(b)(2), an explanation of how the requirements of 35 Ill. Adm. Code 724.350(c) will be complied with or detailed plans and an engineering report describing how the requirements of 35 Ill. Adm. Code 724.190(b)(2) will be met;

c) Detailed plans and an engineering report describing how the pile is designed and is or will be ~~designed,~~ constructed, operated and maintained to meet the requirements of 35 Ill. Adm. Code 724.119, 724.351, 724.352 and 724.353, addressing the following items: ~~This submission must address the following items as specified in that Section:~~

1) Liner, leak detection and removal system.

A) The liner system (except for an existing portion of a waste pile), if the waste pile must meet the requirements of 35 Ill. Adm. Code 724.351(a). If an exemption from the requirement for a liner is sought, as provided by 35 Ill. Adm. Code 724.351(b), the owner or operator ~~must submit detailed plans and engineering and hydrogeologic reports as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time~~ shall submit a copy of the Board order granting an adjusted standard pursuant to 35 Ill. Adm. Code 724.351(b);

B) The double liner and leak (leachate) detection, collection and removal system, if the waste pile must meet the requirements of

35 Ill. Adm. Code 724.351(c). If an exemption from the requirements for double liners and a leak detection, collection and removal system or alternative design is sought as provided by 35 Ill. Adm. Code 724.351(d), (e) or (f), submit appropriate information;

C) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

D) The COA plan if required under 35 Ill. Adm. Code 724.119;

E) Proposed action leakage rate, with rationale, if required under 35 Ill. Adm. Code 724.352, and response action plan, if required under 35 Ill. Adm. Code 724.353;

2) Control of run-on;

3) Control of run-off;

4) Management of collection and holding units associated with run-on and run-off control systems; and

5) Control of wind dispersal of particulate matter, where applicable;

d) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of 35 Ill. Adm. Code 724.354(a), ~~and~~ (b) and (c). This information ~~should~~ must be included in the inspection plan submitted under Section 703.183(~~f~~ e).

e) If the treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

f) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of 35 Ill. Adm. Code 724.356 will be complied with;

g) If incompatible wastes, or incompatible wastes and

materials, will be placed in a waste pile, an explanation of how 35 Ill. Adm. Code 724.357 will be complied with;

h) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required under 35 Ill. Adm. Code 724.358(a). For any waste not to be removed from the waste pile upon closure, the owner or operator ~~must~~ shall submit detailed plans and an engineering report describing how 35 Ill. Adm. Code 724.410(a) and (b) will be complied with. This information ~~should~~ must be included in the closure plan and, where applicable, the post-closure plan submitted under Section 703.183(m)~~.~~; and,

i) A waste management plan for hazardous waste numbers F020, F021, F022, F023, F026 and F027 describing how the surface impoundment is or will be designed, constructed, operated and maintained to meet the requirements of 35 Ill. Adm. Code 724.359. This submission must address the following items as specified in that Section:

1) The volume, physical and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2) The attenuative properties of underlying and surrounding soils or other materials;

3) The mobilizing properties of other materials co-disposed with these wastes; and

4) The effectiveness of additional treatment, design or monitoring techniques.

BOARD NOTE: ~~See 40 CFR 270.18~~Derived from 40 CFR 270.18 (1991), as amended at 57 Fed. Reg. 3486, January 29, 1992.

(Source: Amended at 16 Ill. Reg. , effective)

Section 703.207 Landfills

For facilities that dispose of hazardous waste in landfills, except as otherwise provided in 35 Ill. Adm. Code 724.101, the Part B application must include:

a) A list of the hazardous wastes placed or to be placed

in each landfill or landfill cell;

b) Detailed plans and an engineering report describing how the landfill is designed and is or will be ~~designed,~~ constructed, operated and maintained to ~~comply with~~ meet the requirements of 35 Ill. Adm. Code 724.119, 724.401, 724.402 and 724.403, addressing the following items:~~. This submission must address the following items as specified in that Section:~~

1) Liner, leak detection, collection and removal systems.

A) The liner system ~~and leachate collection and removal system~~ (except for an existing portion of a landfill), if the landfill must meet the requirements of 35 Ill. Adm. Code 724.401(a). If an exemption from the requirements for a liner ~~and a leachate collection and removal system~~ is sought as provided by 35 Ill. Adm. Code 724.401(b), submit ~~detailed plans engineering and hydrogeologic reports as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the groundwater or surface water at any future time~~ a copy of the Board order granting an adjusted standard pursuant to 35 Ill. Adm. Code 724.401(b);

B) The double liner and leak (leachate) detection, collection and removal system, if the landfill must meet the requirements of 35 Ill. Adm. Code 724.401(c). If an exemption from the requirements for double liners and a leak detection, collection and removal system or alternative design is sought as provided by 35 Ill. Adm. Code 724.401(d), (e) or (f), submit appropriate information;

C) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

D) The CQA plan if required under 35 Ill. Adm. Code 724.119;

E) Proposed action leakage rate, with rationale, if required under 35 Ill. Adm. Code 724.402, and response action plan, if required under 35 Ill. Adm. Code 724.404, and proposed pump operating level, if required under 35 Ill. Adm. Code 724.403;

2) Control of run-on;

3) Control of run-off;

4) Management of collection and holding facilities associated with run-on and run-off control systems; and

5) Control of wind dispersal of particulate matter, where applicable;

c) ~~If an exemption from 35 Ill. Adm. Code 724.Subpart F is sought, as provided by 35 Ill. Adm. Code 724.402(a), the owner or operator must submit detailed plans and an engineering report explaining the location of the saturated zone in relation to the landfill, the design of a double-liner system that incorporates a leak detection system between the liners and a leachate collection and removal system above the liners;~~ A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of 35 Ill. Adm. Code 724.403(a), (b), and (c). This information must be included in the inspection plan submitted under Section 703.183(e);

d) A description of how each landfill, including the liner and cover systems, will be inspected in order to meet the requirements of the 35 Ill. Adm. Code 724.403(a) and (b). This information ~~should~~ must be included in the inspection plan submitted under Section 703.183(e);

e) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with 35 Ill. Adm. Code 724.410(a), and a description of how each landfill will be maintained and monitored after closure in accordance with 35 Ill. Adm. Code 724.410(b). This information ~~should~~ must be included in the closure and post-closure plans submitted under Section 703.183(m);

f) If ignitable or reactive wastes will be landfilled, an

explanation of how the requirements of 35 Ill. Adm. Code 724.412 will be complied with;

g) If incompatible wastes, or incompatible wastes and materials, will be landfilled, an explanation of how 35 Ill. Adm. Code 724.413 will be complied with;

h) If bulk or non-containerized liquid waste or waste containing free liquids is to be landfilled, an explanation of how the requirements of 35 Ill. Adm. Code 724.414 will be complied with;

i) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of 35 Ill. Adm. Code 724.415 or 724.416, as applicable, will be complied with~~.~~ ; and,

j) A waste management plan for hazardous waste numbers F020, F021, F022, F023, F026 and F027 describing how a landfill is or will be designed, constructed, operated and maintained to meet the requirements of 35 Ill. Adm. Code 724.417. This submission must address the following items as specified in that Section:

1) The volume, physical and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

2) The attenuative properties of underlying and surrounding soils or other materials;

3) The mobilizing properties of other materials co-disposed with these wastes; and

4) The effectiveness of additional treatment, design or monitoring techniques.

BOARD NOTE: ~~See 40 CFR 270.21~~Derived from 40 CFR 270.21 (1991), as amended at 57 Fed. Reg. 3486, January 29, 1992.

(Source: Amended at 16 Ill. Reg. , effective)

Section 703.Appendix A Classification of Permit Modifications

Class	Modifications
	A. General Permit Provisions
1	1. Administrative and informational changes.

1 2. Correction of typographical errors.

1 3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls).

4. Changes in the frequency of or procedures for monitoring, reporting, sampling or maintenance activities by the permittee:

1 a. To provide for more frequent monitoring, reporting or maintenance.

2 b. Other changes.

5. Schedule of compliance:

1* a. Changes in interim compliance dates, with prior approval of the Agency.

BOARD NOTE: "*" indicates that prior Agency approval is required.

3 b. Extension of final compliance date.

1* 6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the Agency.

1* 7. Changes in ownership or operational control of a facility, provided the procedures of Section 703.260(b) are followed.

B. General Facility Standards

1. Changes to waste sampling or analysis methods:

1 a. To conform with Agency guidance or Board regulations.

1 b. To incorporate changes associated with F039 (multi-source leachate) sampling or analysis methods.

2 c. Other changes.

2. Changes to analytical quality assurance/control plan:

1 a. To conform with agency guidance or regulations.

2 b. Other changes.

1 3. Changes in procedures for maintaining the operating record.

2 4. Changes in frequency or content of inspection schedules.

5. Changes in the training plan:

2 a. That affect the type or decrease the amount of training given to employees.

1 b. Other changes.

6. Contingency plan:

2 a. Changes in emergency procedures (i.e., spill or release response procedures).

1 b. Replacement with functionally equivalent equipment, upgrade or relocate emergency equipment listed.

2 c. Removal of equipment from emergency equipment list.

1 d. Changes in name, address or phone number of coordinators or other persons or agencies identified in the plan.

Note: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change must be reviewed under the same procedures as the permit modification.

7. COA plan:

1 a. Changes that the COA officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications.

2 b. Other changes.

C. Groundwater Protection

1. Changes to wells:

2 a. Changes in the number, location, depth or

design of upgradient or downgradient wells of permitted groundwater monitoring system.

1 b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design or depth of the well.

1* 2. Changes in groundwater sampling or analysis procedures or monitoring schedule, with prior approval of the Agency.

1* 3. Changes in statistical procedure for determining whether a statistically significant change in groundwater quality between upgradient and downgradient wells has occurred, with prior approval of the Agency.

2* 4. Changes in point of compliance.

5. Changes in indicator parameters, hazardous constituents or concentration limits (including ACLs (Alternate Concentration Limits)):

3 a. As specified in the groundwater protection standard.

2 b. As specified in the detection monitoring program.

2 6. Changes to a detection monitoring program as required by 35 Ill. Adm. Code 724.198(j), unless otherwise specified in this Appendix.

7. Compliance monitoring program:

3 a. Addition of compliance monitoring program as required by 35 Ill. Adm. Code 724.198(h)(4) and 724.199.

2 b. Changes to a compliance monitoring program as required by 35 Ill. Adm. Code 724.199(k), unless otherwise specified in this Appendix.

8. Corrective action program:

3 a. Addition of a corrective action program as required by 35 Ill. Adm. Code 724.199(i)(2) and 724.200.

2 b. Changes to a corrective action program as required by 35 Ill. Adm. Code 724.200(h),

unless otherwise specified in this Appendix.

D. Closure

1. Changes to the closure plan:

1* a. Changes in estimate of maximum extent of operations or maximum inventory of waste on-site at any time during the active life of the facility, with prior approval of the Agency.

1* b. Changes in the closure schedule for any unit, changes in the final closure schedule for the facility or extension of the closure period, with prior approval of the Agency.

1* c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the Agency.

1* d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the Agency.

2 e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this Appendix.

2 f. Extension of the closure period to allow a landfill, surface impoundment or land treatment unit to receive non-hazardous wastes after final receipt of hazardous wastes under 35 Ill. Adm. Code 724.213(d) or (e).

3 2. Creation of a new landfill unit as part of closure.

3. Addition of the following new units to be used temporarily for closure activities:

3 a. Surface impoundments.

3 b. Incinerators.

3 c. Waste piles that do not comply with 35 Ill. Adm. Code 724.350(c).

2 d. Waste piles that comply with 35 Ill. Adm.

Code 724.350(c).

2 e. Tanks or containers (other than specified below).

1* f. Tanks used for neutralization, dewatering, phase separation or component separation, with prior approval of the Agency.

E. Post-Closure

1 1. Changes in name, address or phone number of contact in post-closure plan.

2 2. Extension of post-closure care period.

3 3. Reduction in the post-closure care period.

1 4. Changes to the expected year of final closure, where other permit conditions are not changed.

2 5. Changes in post-closure plan necessitated by events occurring during the active life of the facility, including partial and final closure.

F. Containers

1. Modification or addition of container units:

3 a. Resulting in greater than 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a).

2 b. Resulting in up to 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a).

1 c. Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108, with prior approval of the Agency. This modification may also involve the addition of new waste codes or narrative description of wastes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

2.

2 a. Modification of a container unit without increasing the capacity of the unit.

1 b. Addition of a roof to a container unit without alteration of the containment system.

3. Storage of different wastes in containers, except as provided in F(4):

3 a. That require additional or different management practices from those authorized in the permit.

2 b. That do not require additional or different management practices from those authorized in the permit.

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

4. Storage or treatment of different wastes in containers:

2 a. That require addition of units or change in treatment process or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards, or are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1 b. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

G. Tanks

1.

3 a. Modification or addition of tank units resulting in greater than 25% increase in the facility's tank capacity, except as provided in paragraphs G(1)(c), G(1)(d) and G(1)(e).

2 b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in paragraphs G(1)(d) and G(1)(e).

2 c. Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation or component separation.

1* d. After prior approval of the Agency, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation or component separation.

1 e. Modification or addition of tank units or treatment processes that are necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108, with prior approval of the Agency. This modification may also involve the addition of new waste codes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

2 2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit.

1 3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided:

a. The capacity difference is no more than 1500 gallons,

b. The facility's permitted tank capacity is not increased and

c. The replacement tank meets the same conditions in the permit.

2 4. Modification of a tank management practice.

5. Management of different wastes in tanks:

3 a. That require additional or different management practices, tank design, different fire protection specifications or significantly different tank treatment process from that authorized in the permit, except as provided in paragraph G(5)(c).

2 b. That do not require additional or different management practices, tank design, different fire protection specification or significantly different tank treatment process than authorized in the permit, except as provided in paragraph G(5)(d).

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

1 c. That require addition of units or change in treatment processes or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards, or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108. The modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1 d. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

H. Surface Impoundments

3 1. Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity.

3 2. Replacement of a surface impoundment unit.

2 3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system or leachate collection system.

2 4. Modification of a surface impoundment management practice.

5. Treatment, storage or disposal of different wastes in surface impoundments:

3 a. That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.

2 b. That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

1 c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108, and provided that the unit meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), incorporated by reference in 35 Ill. Adm. Code 728.105. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1 d. That are residues from wastewater treatment or incineration, provided the disposal occurs

in a unit that meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), incorporated by reference in 35 Ill. Adm. Code 728.105, and provided further that the surface impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1* 6. Modifications of unconstructed units to comply with 35 Ill. Adm. Code 724.321(c), 724.322, 724.323 and 724.326(d).

7. Changes in response action plan:

3 a. Increase in action leakage rate.

3 b. Change in a specific response reducing its frequency or effectiveness.

2 c. Other changes.

I. Enclosed Waste Piles. For all waste piles, except those complying with 35 Ill. Adm. Code 724.350(c), modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with 35 Ill. Adm. Code 724.350(c).

1. Modification or addition of waste pile units:

3 a. Resulting in greater than 25% increase in the facility's waste pile storage or treatment capacity.

2 b. Resulting in up to 25% increase in the facility's waste pile storage or treatment capacity.

2 2. Modification of waste pile unit without increasing the capacity of the unit.

1 3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting all waste pile conditions in the permit.

2 4. Modification of a waste pile management practice.

5. Storage or treatment of different wastes in waste

piles:

3 a. That require additional or different management practices or different design of the unit.

2 b. That do not require additional or different management practices or different design of the unit.

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

J. Landfills and Unenclosed Waste Piles

3 1. Modification or addition of landfill units that result in increasing the facility's disposal capacity.

3 2. Replacement of a landfill.

3 3. Addition or modification of a liner, leachate collection system, leachate detection system, run-off control or final cover system.

2 4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, run-off control or final cover system.

2 5. Modification of a landfill management practice.

6. Landfill different wastes:

3 a. That require additional or different management practices, different design of the liner, leachate collection system or leachate detection system.

2 b. That do not require additional or different management practices, different design of the liner, leachate collection system or leachate detection system.

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

1 c. That are wastes restricted from land disposal

that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii), incorporated by reference in 35 Ill. Adm. Code 728.108, and provided that the landfill unit meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), incorporated by reference in 35 Ill. Adm. Code 728.105. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1 d. That are residues from wastewater treatment or incineration, provided the disposal occurs in a landfill unit that meets the minimum technological requirements stated in 40 CFR 268.5(h)(2), incorporated by reference in 35 Ill. Adm. Code 728.105, and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027 and F028).

1* 7. Modification of unconstructed units to comply with 35 Ill. Adm. Code 724.351(c), 724.352, 724.353, 724.354(c), 724.401(c), 724.402, 724.403(c) and 724.404.

8. Changes in response action plan:

3 a. Increase in action leakage rate.

3 _ b. Change in a specific response reducing its frequency or effectiveness.

2 _ c. Other changes.

K. Land Treatment

3 1. Lateral expansion of or other modification of a land treatment unit to increase area extent.

2 2. Modification of run-on control system.

3 3. Modify run-off control system.

2 4. Other modification of land treatment unit component specifications or standards required in permit.

5. Management of different wastes in land treatment units:

3 a. That require a change in permit operating conditions or unit design specifications.

2 b. That do not require a change in permit operating conditions or unit design specifications.

Note: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

6. Modification of a land treatment unit management practice to:

3 a. Increase rate or change method of waste application.

1 b. Decrease rate of waste application.

2 7. Modification of a land treatment unit management practice to change measures of pH or moisture content or to enhance microbial or chemical reactions.

3 8. Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops or to modify operating plans for distribution of animal feeds resulting from such crops.

3 9. Modification of operating practice due to detection of releases from the land treatment unit pursuant to 35 Ill. Adm. Code 724.378(g)(2).

3 10. Changes in the unsaturated zone monitoring system resulting in a change to the location, depth, number of sampling points or replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements.

2 11. Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or that replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements.

2	12.	Changes in background values for hazardous constituents in soil and soil-pore liquid.
2	13.	Changes in sampling, analysis or statistical procedure.
2	14.	Changes in land treatment demonstration program prior to or during the demonstration.
1*	15.	Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the Agency's prior approval has been received.
1*	16.	Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the Agency.
3	17.	Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration.
2	18.	Changes in vegetative cover requirements for closure.

L. Incinerators, Boilers and Industrial Furnaces

3	1.	Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit or an ash feed rate limit. The Agency shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.
2	2.	Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit or an ash feed rate limit.

The Agency shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.

3 3. Modification of an incinerator, boiler or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove HCl/Cl_2, metals or particulate from the combustion gases or by changing other features of the incinerator, boiler or industrial furnace that could affect its capability to meet the regulatory performance standards. The Agency shall require a new trial burn to substantiate compliance with the regulatory performance standards, unless this demonstration can be made through other means.

2 4. Modification of an incinerator, boiler or industrial furnace unit in a manner that will not likely affect the capability of the unit to meet the regulatory performance standards but which will change the operating conditions or monitoring requirements specified in the permit. The Agency may require a new trial burn to demonstrate compliance with the regulatory performance standards.

5. Operating requirements:

3 a. Modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide or hydrocarbon concentration, maximum temperature at the inlet to the PM emission control system or operating parameters for the air pollution control system. The Agency shall require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.

3 b. Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed

cutoff procedures or controls.

2 c. Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit.

6. Burning different wastes:

3 a. If the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit, the Agency shall require a new trial burn to substantiate compliance with the regulatory performance standards, unless this demonstration can be made through other means.

2 b. If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit.

BOARD NOTE: See Section 703.280(g) for modification procedures to be used for the management of newly listed or identified wastes.

7. Shakedown and trial burn:

2 a. Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period or the period immediately following the trial burn.

1* b. Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the Agency.

1* c. Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the Agency.

1* d. Changes in the ranges of the operating

requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the Agency.

1 8. Substitution of an alternate type of nonhazardous waste fuel that is not specified in the permit.

BOARD NOTE: Derived from 40 CFR 270.42, Appendix I (1990), as amended at 56 Fed. Reg. 7206, February 21, 1991.

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 720
HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

SUBPART A: GENERAL PROVISIONS

SUBPART B: DEFINITIONS

SUBPART C: RULEMAKING PETITIONS AND OTHER PROCEDURES

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R81-22, 43 PCB 427, at 5 Ill. Reg. 9781, effective as noted in 35 Ill. Adm. Code 700.106; amended and codified in R81-22, 45 PCB 317, at 6 Ill. Reg. 4828, effective as noted in 35 Ill. Adm. Code 700.106; amended in R82-19 at 7 Ill. Reg. 14015, effective Oct. 12, 1983; amended in R84-9, 53 PCB 131 at 9 Ill. Reg. 11819, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 968, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 13998, effective August 12, 1986; amended in R86-19 at 10 Ill. Reg. 20630, effective December 2, 1986; amended in R86-28 at 11 Ill. Reg. 6017, effective March 24, 1987; amended in R86-46 at 11 Ill. Reg. 13435, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19280, effective November 12, 1987;

amended in R87-26 at 12 Ill. Reg. 2450, effective January 15, 1988; amended in R87-39 at 12 Ill. Reg. 12999, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 362, effective December 27, 1988; amended in R89-1 at 13 Ill. Reg. 18278, effective November 13, 1989; amended in R89-2 at 14 Ill. Reg. 3075, effective February 20, 1990; amended in R89-9 at 14 Ill. Reg. 6225, effective April 16, 1990; amended in R90-10 at 14 Ill. Reg. 16450, effective September 25, 1990; amended in R90-17 at 15 Ill. Reg. 7934, effective May 9, 1991; amended in R90-11 at 15 Ill. Reg. 9323, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14446, effective September 30, 1991; amended in R91-13 at 16 Ill. Reg. 9489, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. , effective ; amended in R92-10 at 16 Ill. Reg. , effective

SUBPART B: DEFINITIONS

Section 720.110 Definitions

When used in 35 Ill. Adm. Code 720 through 726 and 728 only, the following terms have the meanings given below:

"Aboveground tank" means a device meeting the definition of "tank" that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

"Act" or "RCRA" means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.)

"Active life" of a facility means the period from the initial receipt of hazardous waste at the facility until the Agency receives certification of final closure.

"Active portion" means that portion of a facility where treatment, storage or disposal operations are being or have been conducted after May 19, 1980, and which is not a closed portion. (See also "closed portion" and "inactive portion".)

"Administrator" means the Administrator of the U.S. Environmental Protection Agency or the Administrator's designee.

"Agency" means the Illinois Environmental Protection Agency.

"Ancillary equipment" means any device including, but

not limited to, such devices as piping, fittings, flanges, valves and pumps, that is used to distribute, meter or control the flow of hazardous waste from its point of generation to storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

"Aquifer" means a geologic formation, group of formations or part of a formation capable of yielding a significant amount of groundwater to wells or springs.

"Authorized representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

"Board" means the Illinois Pollution Control Board.

"Boiler" means an enclosed device using controlled flame combustion and having the following characteristics:

The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids or heated gases; and the unit's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and

While in operation, the unit must maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

The unit must export and utilize at least 75 percent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or

The unit is one which the Board has determined, on a case-by-case basis, to be a boiler, after considering the standards in Section 720.132.

"Carbon regeneration unit" means any enclosed thermal treatment device used to regenerate spent activated carbon.

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

"Closed Portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)

"Component" means either the tank or ancillary equipment of a tank system.

"Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined groundwater.

"Container" means any portable device in which a material is stored, transported, treated, disposed of or otherwise handled.

"Contingency plan" means a document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

"Corrosion expert" means a person who, by reason of knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National

Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

"Designated facility" means a hazardous waste treatment, storage or disposal facility,

Which:

Has received a RCRA permit (or interim status) pursuant to 35 Ill. Adm. Code 702, 703 and 705;

Has received a RCRA permit from USEPA pursuant to 40 CFR 124 and 270 (~~1989~~1991);

Has received a RCRA permit from a state authorized by USEPA pursuant to 40 CFR 271 (~~1989~~1991); or

Is regulated under 35 Ill. Adm. Code 721.106(c)(2) or 266.Subpart F; and

Which has been designated on the manifest by the generator pursuant to 35 Ill. Adm. Code 722.120.

If a waste is destined to a facility in a state, other than Illinois, which has been authorized by USEPA pursuant to 40 CFR 271, but which has not yet obtained authorization to regulate that waste as hazardous, then the designated facility must be a facility allowed by the receiving state to accept such waste.

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

"Director" means the Director of the Illinois Environmental Protection Agency.

"Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous waste into or on any land or water.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste or hazardous waste into or on any land or water so that such solid 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.

"Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water and at which waste will remain after closure.

"Drip pad" means an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation and surface water run-on to an associated collection system at wood preserving plants.

"Elementary neutralization unit" means a device which:

Is used for neutralizing wastes which are hazardous only because they exhibit the corrosivity characteristic defined in 35 Ill. Adm. Code 721.122 or are listed in 35 Ill. Adm. Code 721.Subpart D only for this reason; and

Meets the definition of tank, tank system, container, transport vehicle or vessel in this Section.

"EPA" or "USEPA " means United States Environmental Protection Agency.

"EPA hazardous waste number" or "USEPA hazardous waste number" means the number assigned by EPA to each hazardous waste listed in 35 Ill. Adm. Code 721.Subpart D and to each characteristic identified in 35 Ill. Adm. Code 721.Subpart C.

"EPA identification number" or "USEPA identification number" means the number assigned by USEPA pursuant to 35 Ill. Adm. Code 722 through 725 to each generator, transporter and treatment, storage or disposal facility.

"EPA region" means the states and territories found in any one of the following ten regions:

Region I: Maine, Vermont, New Hampshire, Massachusetts, Connecticut and Rhode Island

Region II: New York, New Jersey, Commonwealth of Puerto Rico and the U.S. Virgin Islands

Region III: Pennsylvania, Delaware, Maryland, West Virginia, Virginia and the District of Columbia

Region IV: Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina and Florida

Region V: Minnesota, Wisconsin, Illinois, Michigan, Indiana and Ohio

Region VI: New Mexico, Oklahoma, Arkansas, Louisiana and Texas

Region VII: Nebraska, Kansas, Missouri and Iowa

Region VIII: Montana, Wyoming, North Dakota, South Dakota, Utah and Colorado

Region IX: California, Nevada, Arizona, Hawaii, Guam, American Samoa and Commonwealth of the Northern Mariana Islands

Region X: Washington, Oregon, Idaho and Alaska

"Equivalent method" means any testing or analytical method approved by the Board pursuant to Section 720.120.

"Existing hazardous waste management (HWM) facility" or "existing facility" means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility had commenced construction if the owner or operator had obtained the federal, state and local approvals or permits necessary to begin physical construction and either:

A continuous on-site, physical construction program had begun or

The owner or operator had entered into contractual obligations -- which could not be cancelled or modified without substantial loss -- for physical construction of the facility to be completed within a reasonable time.

"Existing portion" means that land surface area of an existing waste management unit, included in the original Part A permit application, on which wastes have been placed prior to the issuance of a permit.

"Existing tank system" or "existing component" means a

tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all federal, State and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either

A continuous on-site physical construction or installation program has begun; or

The owner or operator has entered into contractual obligations -- which cannot be canceled or modified without substantial loss -- for physical construction of the site or installation of the tank system to be completed within a reasonable time.

"Facility" means all contiguous land and structures, other appurtenances and improvements on the land used for treating, storing or disposing of hazardous waste. A facility may consist of several treatment, storage or disposal operational units (e.g., one or more landfills, surface impoundments or combinations of them).

"Final closure" means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under 35 Ill. Adm. Code 724 and 725 are no longer conducted at the facility unless subject to the provisions of 35 Ill. Adm. Code 722.134.

"Federal agency" means any department, agency or other instrumentality of the federal government, any independent agency or establishment of the federal government including any government corporation and the Government Printing Office.

"Federal, state and local approvals or permits necessary to begin physical construction" means permits and approvals required under federal, state or local hazardous waste control statutes, regulations or ordinances.

"Food-chain crops" means tobacco, crops grown for human consumption and crops grown for feed for animals whose products are consumed by humans.

"Freeboard" means the vertical distance between the top

of a tank or surface impoundment dike and the surface of the waste contained therein.

"Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

"Generator" means any person, by site, whose act or process produce hazardous waste identified or listed in 35 Ill. Adm. Code 721 or whose act first causes a hazardous waste to become subject to regulation.

"Groundwater" means water below the land surface in a zone of saturation.

"Hazardous waste" means a hazardous waste as defined in 35 Ill. Adm. Code 721.103.

"Hazardous waste constituent" means a constituent which caused the hazardous waste to be listed in 35 Ill. Adm. Code 721.Subpart D, or a constituent listed in of 35 Ill. Adm. Code 721.124.

"Hazardous waste management unit" is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

"Inactive portion" means that portion of a facility which is not operated after November 19, 1980. (See also "active portion" and "closed portion".)

"Incinerator" means any enclosed device that:

Uses controlled flame combustion and neither:

Meets the criteria for classification as a boiler, sludge dryer or carbon regeneration unit, nor

Is listed as an industrial furnace; or

Meets the definition of infrared incinerator or plasma arc incinerator.

"Incompatible waste" means a hazardous waste which is suitable for:

Placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container inner liners or tank walls); or

Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes or gases or flammable fumes or gases.

(See 35 Ill. Adm. Code 725.Appendix E for examples.)

"Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

Cement kilns

Lime kilns

Aggregate kilns

Phosphate kilns

Coke ovens

Blast furnaces

Smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machines, roasters and foundry furnaces)

Titanium dioxide chloride process oxidation reactors

Methane reforming furnaces

Pulping liquor recovery furnaces

Combustion devices used in the recovery of sulfur values from spent sulfuric acid

Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace

is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3%, the acid product is used in a manufacturing process and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of 20%, as generated.

Any other such device as the Agency determines to be an "Industrial Furnace" on the basis of one or more of the following factors:

The design and use of the device primarily to accomplish recovery of material products;

The use of the device to burn or reduce raw materials to make a material product;

The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;

The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

The use of the device in common industrial practice to produce a material product; and

Other relevant factors.

"Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

"Infrared incinerator" means any enclosed device which uses electric powered resistance heaters as a source of radiant heat and which is not listed as an industrial furnace.

"Inground tank" means a device meeting the definition of "tank" whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

"In operation" refers to a facility which is treating, storing or disposing of hazardous waste.

"Injection well" means a well into which fluids are being injected. (See also "underground injection".)

"Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

"Installation inspector" means a person who, by reason of knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

"International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

"Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

"Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, an underground mine or a cave.

"Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

"LDS" means leak detection system.

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

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

"Leak-detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls (e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

"Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous waste.

"Manifest" means the shipping document originated and signed by the generator which contains the information required by 35 Ill. Adm. Code 722.Subpart B.

"Manifest document number" means the USEPA twelve digit identification number assigned to the generator plus a unique five digit document number assigned to the manifest by the generator for recording and reporting purposes.

"Mining overburden returned to the mine site" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

"Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored or disposed of and which is not a container, tank, tank system, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 35 Ill. Adm. Code 730, or a unit eligible for a research, development and demonstration permit under 35 Ill. Adm. Code 703.231.

"Movement" means that hazardous waste transported to a facility in an individual vehicle.

"New hazardous waste management facility" or "new facility" means a facility which began operation, or for which construction commenced, after November 19, 1980. (See also "Existing hazardous waste management facility".)

"New tank system" or "new tank component" means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation commenced after July 14, 1986; except, however, for purposes of 35 Ill. Adm. Code 724.293(g)(2) and 725.293(g)(2), a new tank system is one for which construction commences after July 14, 1986. (See also "existing tank system.")

"Onground tank" means a device meeting the definition of "tank" that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surfaces so that the external tank bottom cannot be visually inspected.

"On-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.

"Open burning" means the combustion of any material without the following characteristics:

Control of combustion air to maintain adequate temperature for efficient combustion;

Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

Control of emission of the gaseous combustion products.

(See also "incineration" and "thermal treatment".)

"Operator" means the person responsible for the overall operation of a facility.

"Owner" means the person who owns a facility or part of a facility.

"Partial closure" means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of 35 Ill. Adm. Code 724 or 725 at a facility which contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated

piping and underlying containment systems), landfill cell, surface impoundment, waste pile or other hazardous waste management unit, while other units of the same facility continue to operate.

"Person" means an individual, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state or any interstate body.

"Personnel" or "facility personnel" means all persons who work at or oversee the operations of a hazardous waste facility and whose actions or failure to act may result in noncompliance with the requirements of 35 Ill. Adm. Code 724 or 725.

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

"Plasma arc incinerator" means any enclosed device which uses a high intensity electrical discharge or arc as a source of heat and which is not listed as an industrial furnace.

"Point source" means any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

"Publicly owned treatment works" or "POTW" is as defined in 35 Ill. Adm. Code 310.110.

"Qualified groundwater scientist" means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration, professional certifications or completion of accredited university courses that enable the individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.

BOARD NOTE: "State registration" includes, but is not limited to, registration as a professional engineer with the Department of Professional

Regulation, pursuant to Ill. Rev. Stat. 1991, ch. 111, par. 5201 and 68 Ill. Adm. Code 1380. "Professional certification" includes, but is not limited to, certification under the certified ground water professional program of the National Ground Water Association.

"Regional Administrator" means the Regional Administrator for the EPA Region in which the facility is located or the Regional Administrator's designee.

"Representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, groundwater) which can be expected to exhibit the average properties of the universe or whole.

"Replacement unit" means a landfill, surface impoundment or waste pile unit from which all or substantially all of the waste is removed, and which is subsequently reused to treat, store or dispose of hazardous waste. "Replacement unit" does not include a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with a closure or corrective action plan approved by USEPA or the Agency.

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

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

"Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.

"SIC Code" means Standard Industrial Code as defined in Standard Industrial Classification Manual, incorporated by reference in Section 720.111.

"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 exclusive of the treated effluent from a wastewater treatment plant.

"Sludge dryer" means any enclosed thermal treatment device which is used to dehydrate sludge and which has a total thermal input, excluding the heating value of the sludge itself, of 2500 Btu/lb or less of sludge

treated on a wet weight basis.

"Small Quantity Generator" means a generator which generates less than 1000 kg of hazardous waste in a calendar month.

"Solid waste" means a solid waste as defined in 35 Ill. Adm. Code 721.102.

"Sump" means any pit or reservoir that meets the definition of tank and those troughs or trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment or disposal facilities; except that, as used in the landfill, surface impoundment and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

"State" means any of the several states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

"Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of or stored elsewhere.

"Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, manmade excavation or diked area formed primarily of earthen materials (although it may be lined with manmade materials) which is designed to hold an accumulation of liquid wastes or wastes containing free liquids and which is not an injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds and lagoons.

"Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

"Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

"Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical or

biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation and microwave discharge. (See also "incinerator" and "open burning".)

"Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

"Transfer facility" means any transportation related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held during the normal course of transportation.

"Transport vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

"Transportation" means the movement of hazardous waste by air, rail, highway or water.

"Transporter" means a person engaged in the off-site transportation of hazardous waste by air, rail, highway or water.

"Treatability study" means:

A study in which a hazardous waste is subjected to a treatment process to determine:

Whether the waste is amenable to the treatment process.

What pretreatment (if any) is required.

The optimal process conditions needed to achieve the desired treatment.

The efficiency of a treatment process for a specific waste or wastes. Or,

The characteristics and volumes of residuals from a particular treatment process.

Also included in this definition for the purpose

of 35 Ill. Adm. Code 721.104(e) and (f) exemptions are liner compatibility, corrosion and other material compatibility studies and toxicological and health effects studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

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

"Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed or immobilized.

"Underground injection" means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well".)

"Underground tank" means a device meeting the definition of "tank" whose entire surface area is totally below the surface of and covered by the ground.

"Unfit-for-use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

"United States" means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

"Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

"USEPA" means United States Environmental Protection

Agency.

"Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

"Wastewater treatment unit" means a device which:

Is part of a wastewater treatment facility which has an NPDES permit pursuant to 35 Ill. Adm. Code 309 or a pretreatment permit or authorization to discharge pursuant to 35 Ill. Adm. Code 310; and

Receives and treats or stores an influent wastewater which is a hazardous waste as defined in 35 Ill. Adm. Code 721.103, or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in 35 Ill. Adm. Code 721.103, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in 35 Ill. Adm. Code 721.103; and

Meets the definition of tank or tank system in this Section.

"Water (bulk shipment)" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

"Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

"Well injection" (See "underground injection").

"Zone of engineering control" means an area under the control of the owner or operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to groundwater or surface water.

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 721
IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

SUBPART A: GENERAL PROVISIONS

SUBPART B: CRITERIA FOR IDENTIFYING THE CHARACTERISTICS OF HAZARDOUS WASTE AND FOR LISTING HAZARDOUS WASTES

SUBPART C: CHARACTERISTICS OF HAZARDOUS WASTE

SUBPART D: LISTS OF HAZARDOUS WASTE

(Repealed)
Table C Sample Preparation/Sample Introduction Techniques (Repealed)
721.Appendix G Basis for Listing Hazardous Wastes
721.Appendix H Hazardous Constituents
721.Appendix I Wastes Excluded under Section 720.120 and 720.122
Table A Wastes Excluded from Non-Specific Sources
Table B Wastes Excluded from Specific Sources
Table C Wastes Excluded From Commercial Chemical Products, Off-Specification Species, Container Residues, and Soil Residues Thereof
Table D Wastes Excluded by Adjusted Standard
721.Appendix J Method of Analysis for Chlorinated Dibenzo-p-Dioxins and Dibenzofurans
721.Appendix Z Table to Section 721.102

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R81-22, 43 PCB 427, at 5 Ill. Reg. 9781, effective as noted in 35 Ill. Adm. Code 700.106; amended and codified in R81-22, 45 PCB 317, at 6 Ill. Reg. 4828, effective as noted in 35 Ill. Adm. Code 700.106; amended in R82-18, 51 PCB 31, at 7 Ill. Reg. 2518, effective February 22, 1983; amended in R82-19, 53 PCB 131, at 7 Ill. Reg. 13999, effective October 12, 1983; amended in R84-34, 61 PCB 247, at 8 Ill. Reg. 24562, effective December 11, 1984; amended in R84-9, at 9 Ill. Reg. 11834, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 998, effective January 2, 1986; amended in R85-2 at 10 Ill. Reg. 8112, effective May 2, 1986; amended in R86-1 at 10 Ill. Reg. 14002, effective August 12, 1986; amended in R86-19 at 10 Ill. Reg. 20647, effective December 2, 1986; amended in R86-28 at 11 Ill. Reg. 6035, effective March 24, 1987; amended in R86-46 at 11 Ill. Reg. 13466, effective August 4, 1987; amended in R87-32 at 11 Ill. Reg. 16698, effective September 30, 1987; amended in R87-5 at 11 Ill. Reg. 19303, effective November 12, 1987; amended in R87-26 at 12 Ill. Reg. 2456, effective January 15, 1988; amended in R87-30 at 12 Ill. Reg. 12070, effective July 12, 1988; amended in R87-39 at 12 Ill. Reg. 13006, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 382, effective December 27, 1988; amended in R89-1 at 13 Ill. Reg. 18300, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14401, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16472, effective September 25, 1990; amended in R90-17 at 15 Ill. Reg. 7950, effective May 9, 1991; amended in R90-11 at 15 Ill. Reg. 9332, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14473, effective September 30, 1991; amended in R91-12 at 16 Ill. Reg. 2155, effective January 27, 1992; amended in R91-26 at 16 Ill. Reg. 2600, effective February 3, 1992; amended in R91-13 at 16 Ill. Reg. 9519, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. , effective ; amended in R92-10

at 16 Ill. Reg. , effective

SUBPART A: GENERAL PROVISIONS

Section 721.103 Definition of Hazardous Waste

a) A solid waste, as defined in Section 721.102, is a hazardous waste if:

1) It is not excluded from regulation as a hazardous waste under Section 721.104(b); and

2) It meets any of the following criteria~~:~~:

A) It exhibits any of the characteristics of hazardous waste identified in Subpart C. Except that any mixture of a waste from the extraction, beneficiation or processing of ores or minerals excluded under Section 721.104(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under Subpart C is a hazardous waste only: if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred; or, if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the ~~EP toxicity (extraction procedure toxicity)~~toxicity characteristic, characteristic to such mixtures, the mixture is also a hazardous waste: if it exceeds the maximum concentration for any contaminant listed in Section 721.124 that would not have been exceeded by the excluded waste alone if the mixture had not occurred; or, if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

B) It is listed in Subpart D and has not been excluded from the lists in Subpart D under 35 Ill. Adm. Code 720.120 and 720.122.

C) It is a mixture of a solid waste and a hazardous waste that is listed in Subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in Subpart C, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C, or

unless the solid waste: is excluded from regulation under Section 721.104(b)(7); and, the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C for which the hazardous waste listed in Subpart D was listed.

D) It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this ~~paragraph~~ this subsection (a)(2) under 35 Ill. Adm. Code 720.120 and 720.122; however, the following mixtures of solid wastes and hazardous wastes listed in Subpart D are not hazardous wastes (except by application of subsection (a)(2)(A) or (B), above) if the generator ~~can~~ demonstrates that the mixture consists of wastewater the discharge of which is subject to regulation under either 35 Ill. Adm. Code 309 or 310 (including wastewater at facilities which have eliminated the discharge of wastewater) and~~:~~:

i) One or more of the following ~~spent~~ solvents listed in Section 721.131 - carbon tetrachloride, ~~tetrachloro ethylene~~tetrachloroethylene, trichloroethylene - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or ~~pre-treatment~~ pretreatment system does not exceed 1 part per million; or

ii) One or more of the following spent solvents listed in Section 721.131 - methylene chloride, 1,1,1 - trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent ~~chloro fluorocarbon~~ chlorofluorocarbon solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater

into the headworks of the facility's wastewater treatment or ~~pre-treatment~~ pretreatment system does not exceed 25 parts per million; or

iii) One of the following wastes listed in Section 721.132 - heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050); or

iv) A ~~discharged~~ discarded commercial chemical product, or chemical intermediate listed in Section 721.133, arising from de minimis losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subsection, "de minimis" losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

v) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in Subpart D, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or ~~pre-treatment~~ pretreatment system, or provided that the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or ~~pre-treatment~~ pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be

discharged to wastewater are not to be included in this calculation.

b) A solid waste which is not excluded from regulation under subsection (a)(1), above, becomes a hazardous waste when any of the following events occur:

1) In the case of a waste listed in Subpart D, when the waste first meets the listing description set forth in Subpart D.

2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in Subpart D is first added to the solid waste.

3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

c) Unless and until it meets the criteria of subsection (d), below:

1) A hazardous waste will remain a hazardous waste.

2) Specific inclusions and exclusions.

A) Except as otherwise provided in subsection (c)(2)(B), below, any solid waste generated from the treatment, storage or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate (but not including precipitation run-off), is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

B) The following solid wastes are not hazardous even though they are generated from the treatment, storage or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

i) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332) (Standard

Industrial Codes, as defined and incorporated by reference in 35 Ill. Adm. Code 720.110 and 720.111).

ii) Wastes from burning any of the materials exempted from regulation by Section 721.106(a)(3)(E), (F), (G) or (H).

iii) Nonwastewater residues, such as slag, resulting from high temperature metal recovery (HTMR) processing of K061 waste, in units identified below, that are disposed of in non-hazardous waste units, provided that these residues meet the generic exclusion levels identified below for all constituents, and exhibit no characteristics of hazardous waste. The types of units are: rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or the following types of industrial furnaces (as defined in 35 Ill. Adm. Code 720.110): blast furnaces, smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machines, roasters and foundry furnaces), and other furnaces designated by the Agency pursuant to that definition. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and when the process or operation generating the waste changes. The generic exclusion levels are:

Constituent	Maximum for any single composite sample (mg/L)
Antimony	0.063
Arsenic	0.055
Barium	6.3
Beryllium	0.0063
Cadmium	0.032
Chromium (total)	0.33
Lead	0.095
Mercury	0.009

Nickel	0.63
Selenium	0.16
Silver	0.30
Thallium	0.013
Vanadium	1.26

For each shipment of K061 HTMR residues sent to a nonhazardous waste management unit, a notification and certification must be sent to the Agency (or, for out-of-State shipments, to the appropriate Regional Administrator of USEPA or state agency authorized to implement 40 CFR 268 requirements). The notification must include the following information: The name and address of the nonhazardous waste management unit receiving the waste shipment; The USEPA hazardous waste number and treatability group at the initial point of generation; The treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows:

"I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

d) Any solid waste described in subsection (c), above, is not a hazardous waste if it meets the following criteria:

1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Subpart C. (However, wastes which exhibit a characteristic at the point of generation may still be subject to the requirements of 35 Ill. Adm. Code 728, even if they no longer exhibit a characteristic at the point of land disposal.)

2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in

Subpart D, it also has been excluded from subsection (c), above, under 35 Ill. Adm. Code 720.120 and 720.122.

e) Sunset provision. Subsections (a)(2)(D) and (c)(2)(A) above shall remain in effect only until April 28, 1993.

(Source: Amended at 16 Ill. Reg. , effective)

Section 721.104 Exclusions

a) Materials which are not solid wastes. The following materials are not solid wastes for the purpose of this Part:

1) Sewage:

A) Domestic sewage; and

B) Any mixture of domestic sewage and other waste that passes through a sewer system to publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

2) Industrial wastewater discharges that are point source discharges with NPDES permits issued by the Agency pursuant to Section 12(f) of the Environmental Protection Act and 35 Ill. Adm. Code 309.

BOARD NOTE: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.

3) Irrigation return flows.

4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)

5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless

accumulated speculatively as defined in Section 721.101(c);

7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in Section 721.101(c).

8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process, provided:

A) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

B) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces or incinerators);

C) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

D) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

9) Wood preserving wastes.

A) Spent wood preserving solutions that have been used and are reclaimed and reused for their original intended purpose; and

B) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

10) ~~When used as a fuel, coke and coal tar from the iron and steel industry that contains or is produced from decanter tank tar sludge, USEPA hazardous waste K087. The process of producing coke and coal tar from such decanter tank tar sludge in a coke oven is likewise excluded from regulation.~~Hazardous waste number K087, and any wastes from the coke by-products processes which are hazardous only because they exhibit the toxicity characteristic specified in Section 721.124, when, subsequent to generation, these materials are recycled to coke ovens, to the tar

recovery process as a feedstock to produce coal tar or are mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or the tar refining process.

11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste" means any waste material (including garbage, trash and sanitary wastes 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). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of or otherwise managing hazardous wastes for the purposes of regulation under this Part, if such facility:

A) Receives and burns only:

i) Household waste (from single and multiple dwellings, hotels, motels and other residential sources) and

ii) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

B) Such facility does not accept hazardous waste and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

2) Solid wastes generated by any of the following and which are returned to the soil as fertilizers:

A) The growing and harvesting of agricultural crops.

B) The raising of animals, including animal manures.

3) Mining overburden returned to the mine site.

4) Fly ash waste, bottom ash waste, slag waste and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided in 35 Ill. Adm. Code 726.212 for facilities that burn or process hazardous waste.

5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

6) Chromium wastes:

A) Wastes which fail the test for the toxicity characteristic (Section 721.124 and Appendix B) because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

i) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

ii) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

iii) The waste is typically and frequently managed in non-oxidizing environments.

B) Specific wastes which meet the standard in subsections (b)(6)(A)(i), (ii) and (iii), above, (so long as they do not fail the test for the toxicity characteristic for any other constituent ~~of EP toxicity,~~ and do not ~~fail~~

~~the test for~~ exhibit any other characteristic) are:

i) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

ii) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

iii) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

iv) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

v) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

vi) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

vii) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product

manufacturing industries.

viii) Wastewater treatment sludges from the production of titanium dioxide pigment using chromium-bearing ores by the chloride process.

7) Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore), except as provided by 35 Ill. Adm. Code 726.212 for facilities that burn or process hazardous waste. For purposes of this subsection, beneficiation of ores and minerals is restricted to the following activities: crushing, grinding, washing, dissolution, crystallization, filtration, sorting, sizing, drying, sintering, pelletizing, briquetting, calcining to remove water or carbon dioxide, roasting, autoclaving or chlorination in preparation for leaching (except where the roasting or autoclaving or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing), gravity concentration, magnetic separation, electrostatic separation, floatation, ion exchange, solvent extraction, electrowinning, precipitation, amalgamation, and heap, dump, vat tank and in situ leaching. For the purposes of this subsection, solid waste from the processing of ores and minerals includes only the following wastes:

A) Slag from primary copper processing;

B) Slag from primary lead processing;

C) Red and brown muds from bauxite refining;

D) Phosphogypsum from phosphoric acid production;

E) Slag from elemental phosphorus production;

F) Gasifier ash from coal gasification;

G) Process wastewater from coal gasification;

H) Calcium sulfate wastewater treatment plant sludge from primary copper processing;

I) Slag tailings from primary copper processing;

J) Fluorogypsum from hydrofluoric acid production;

K) Process wastewater from hydrofluoric acid production;

L) Air pollution control dust/sludge from iron blast furnaces;

M) Iron blast furnace slag;

N) Treated residue from roasting/leaching of chrome ore;

O) Process wastewater from primary magnesium processing by the anhydrous process;

P) Process wastewater from phosphoric acid production;

Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;

R) Basic oxygen furnace and open hearth furnace slag from carbon steel production;

S) Chloride processing waste solids from titanium tetrachloride production; and,

T) Slag from primary zinc smelting.

8) Cement kiln dust waste, except as provided by 35 Ill. Adm. Code ~~266~~726.212 for facilities that burn or process hazardous waste.

9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the toxicity characteristic ~~solely for arsenic~~ for hazardous waste codes D004 through D017 and which is not a hazardous waste for any other reason ~~or reasons~~ if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

10) Petroleum-contaminated media and debris that fail the test for the toxicity characteristic of Section 721.124 (hazardous waste codes D018 through D043 only) and are subject to corrective action regulations under 35 Ill. Adm. Code 731.

11) Injected groundwater that is hazardous only because it exhibits the toxicity characteristic (USEPA hazardous waste codes D018 through D024 only) in Section 721.124 that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals petroleum bulk plants, petroleum pipelines and petroleum spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For groundwater returned through infiltration galleries from such at petroleum refineries, marketing terminals and bulk plants, until October 2, 1991. New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

A) Operations are performed pursuant to a "free product removal report" pursuant to 35 Ill. Adm. Code 731.164; and

B) A copy of the "free product removal report" has been submitted to:

Characteristics Section (OS-333)
USEPA
401 M Street, SW
Washington, D.C. 20460

12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems, which use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

15) Non-terne plated used oil filters which are not mixed with wastes listed in Subpart D, if these oil filters have been gravity hot-drained using one of the following methods:

A) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

B) Hot-draining and crushing;

C) Dismantling and hot-draining; or,

D) Any other equivalent hot-draining method which will remove used oil.

c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment manufacturing unit, is not subject to regulation under 35 Ill. Adm. Code 702, 703, 705 and 722 through 725 and 728 or to the notification requirements of Section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

d) Samples

1) Except as provided in subsection (d)(2), below, a sample of solid waste or a sample of water, soil or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this Part or 35 Ill. Adm. Code 702, 703, 705 and 722 through 728. The sample qualifies when:

A) The sample is being transported to a laboratory for the purpose of testing; or

B) The sample is being transported back to the sample collector after testing; or

C) The sample is being stored by the sample collector before transport to a laboratory for testing; or

D) The sample is being stored in a laboratory before testing; or

E) The sample is being stored in a laboratory for testing but before it is returned to the sample collector; or

F) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

2) In order to qualify for the exemption in subsection (d)(1)(A) and (B), above, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

A) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS) or any other applicable shipping requirements; or

B) Comply with the following requirements if the sample collector determines that DOT, USPS or other shipping requirements do not apply to the shipment of the sample:

i) Assure that the following information accompanies the sample: The sample collector's name, mailing address and telephone number; the laboratory's name, mailing address and telephone number; the quantity of the sample; the date of the shipment; and a description of the sample.

ii) Package the sample so that it does not leak, spill or vaporize from its packaging.

3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in subsection (d)(1), above.

e) Treatability study samples.

1) Except as is provided in subsection (e)(2), below, persons who generate or collect samples for the purpose of conducting treatability studies, as defined in 35 Ill. Adm. Code 720.110, are not subject to any requirement of 35 Ill. Adm. Code 721 through 723 or to the notification requirements of Section 3010 of the Resource Conservation and Recovery Act. Nor are such samples included in the quantity determinations of Section 721.105 and 35 Ill. Adm. Code 722.134(d) when:

A) The sample is being collected and prepared for transportation by the generator or sample collector; or,

B) The sample is being accumulated or stored by

the generator or sample collector prior to transportation to a laboratory or testing facility; or

C) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

2) The exemption in subsection (e)(1), above, is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

A) The generator or sample collector uses (in "treatability studies") no more than 1000 kg of any non-acute hazardous waste, 1 kg of acute hazardous waste or 250 kg of soils, water or debris contaminated with acute hazardous waste for each process being evaluated for each generated wastestream; and

B) The mass of each shipment does not exceed 1000 kg of non-acute hazardous waste, 1 kg of acute hazardous waste or 250 kg of soils, water or debris contaminated with acute hazardous waste; and

C) The sample must be packaged so that it does not leak, spill or vaporize from its packaging during shipment and the requirements of subsections (e)(2)(C)(i) or (ii), below, are met.

i) The transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS) or any other applicable shipping requirements; or

ii) If the DOT, USPS or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample: The name, mailing address and telephone number of the originator of the sample; the name, address and telephone number of the facility that will perform the treatability study; the quantity of the sample; the date of the shipment; and, a description of the sample, including its USEPA hazardous waste number.

D) The sample is shipped to a laboratory or testing facility which is exempt under subsection (f), below, or has an appropriate RCRA permit or interim status.

E) The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:

i) Copies of the shipping documents;

ii) A copy of the contract with the facility conducting the treatability study;

iii) Documentation showing: The amount of waste shipped under this exemption; the name, address and USEPA identification number of the laboratory or testing facility that received the waste; the date the shipment was made; and, whether or not unused samples and residues were returned to the generator.

F) The generator reports the information required in subsection (e)(2)(E)(iii), above, in its report under 35 Ill. Adm. Code 722.141.

3) The Agency may grant requests, on a case-by-case basis, for quantity limits in excess of those specified in subsection (e)(2)(A), above, for up to an additional 500 kg of any non-acute hazardous waste, 1 kg of acute hazardous waste and 250 kg of soils, water or debris contaminated with acute hazardous waste, to conduct further treatability study evaluation when: There has been an equipment or mechanical failure during the conduct of the treatability study; there is need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or, there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment. The additional quantities allowed are subject to all the provisions in subsections (e)(1) and (e)(2)(B) through (F), above. The generator or sample collector must apply to the Agency and provide in writing the following information:

A) The reason why the generator or sample collector requires additional quantity of sample for the treatability study evaluation and the additional quantity needed;

B) Documentation accounting for all samples of hazardous waste from the wastestream which have been sent for or undergone treatability studies, including the date each previous sample was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results of each treatability study;

C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

D) If such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment have been made to protect against further breakdowns; and,

E) Such other information as the Agency determines is necessary.

4) Final Agency determinations pursuant to this subsection may be appealed to the Board.

f) Samples undergoing treatability studies at laboratories or testing facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirement of this Part, or of 35 Ill. Adm. Code 702, 703, 705, 722 through 726, and 728, or to the notification requirements of Section 3010 of the Resource Conservation and Recovery Act, provided that the requirements of subsections (f)(1) through (f)(11), below, are met. A mobile treatment unit may qualify as a testing facility subject to subsections (f)(1) through (f)(11), below. Where a group of mobile treatment units are located at the same site, the limitations specified in subsections (f)(1) through (f)(11), below, apply to the entire group of mobile treatment units collectively as if the group were one

mobile treatment unit.

1) No less than 45 days before conducting treatability studies, the facility notifies the Agency in writing that it intends to conduct treatability studies under this subsection.

2) The laboratory or testing facility conducting the treatability study has a USEPA identification number.

3) No more than a total of 250 kg of "as received" hazardous waste is subjected to initiation of treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 1000 kg, the total of which can include 500 kg of soils, water or debris contaminated with acute hazardous waste or 1 kg of acute hazardous waste. This quantity limitation does not include:

   A) Treatability study residues; and,

   B) Treatment materials (including nonhazardous solid waste) added to "as received" hazardous waste.

5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year has elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs.

6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

7) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

   A) The name, address and USEPA identification number of the generator or sample collector

of each waste sample;

B) The date the shipment was received;

C) The quantity of waste accepted;

D) The quantity of "as received" waste in storage each day;

E) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

F) The date the treatability study was concluded;

G) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the USEPA identification number.

8) The facility keeps, on-site, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date of each treatability study.

9) The facility prepares and submits a report to the Agency by March 15 of each year that estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and includes the following information for the previous calendar year:

A) The name, address and USEPA identification number of the facility conducting the treatability studies;

B) The types (by process) of treatability studies conducted;

C) The names and addresses of persons for whom studies have been conducted (including their USEPA identification numbers);

D) The total quantity of waste in storage each day;

E) The quantity and types of waste subjected to

treatability studies;

F) When each treatability study was conducted;

G) The final disposition of residues and unused sample from each treatability study;

10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under Section 721.103 and, if so, are subject to 35 Ill. Adm. Code 702, 703 and 721 through 728, unless the residues and unused samples are returned to the sample originator under the subsection (e) exemption, above.

11) The facility notifies the Agency by letter when the facility is no longer planning to conduct any treatability studies at the site.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART B: CRITERIA FOR IDENTIFYING THE CHARACTERISTICS OF HAZARDOUS WASTE AND FOR LISTING HAZARDOUS WASTES

Section 721.111 Criteria for Listing Hazardous Waste

a) USEPA lists a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:

1) It exhibits any of the characteristics of hazardous waste identified in Subpart C; or

2) Acute hazardous waste. It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 mg/kg, an inhalation LC 50 toxicity (rat) of less than 2 mg/L, or a dermal LD 50 toxicity (rabbit) of less than 200 mg/kg or is otherwise capable of causing or significantly contributing to an increase in serious irreversible or incapacitating reversible, illness.

BOARD NOTE: Waste listed in accordance with these criteria are designated Acute Hazardous Waste.

3) Toxic waste. It contains any of the toxic constituents listed in Appendix H and, after considering ~~any of~~ the following factors, USEPA

concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed:

BOARD NOTE: Substances are listed in Appendix H only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms.

A) The nature of the toxicity presented by the constituent.

B) The concentration of the constituent in the waste.

C) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in subsection (a)(3)(G).

D) The persistence of the constituent or any toxic degradation product of the constituent.

E) The potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation.

F) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.

G) The plausible types of improper management to which the waste could be subjected.

H) The quantities of the waste generated at individual generation sites or on a regional or national basis.

I) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of the wastes containing the constituent.

J) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.

K) Such other factors as may be appropriate.

BOARD NOTE: Wastes listed in accordance with these criteria are designated toxic wastes.

b) USEPA may list classes or types of solid waste as hazardous waste if USEPA has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in Section 1004(5) of the Resource Conservation and Recovery Act (42 USC 6901 et seq.)

c) USEPA will use the criteria for listing specified in this Section to establish the exclusion limits referred to in Section 721.105(c).

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 724
STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

SUBPART A: GENERAL PROVISIONS

SUBPART B: GENERAL FACILITY STANDARDS

SUBPART C: PREPAREDNESS AND PREVENTION

SUBPART D: CONTINGENCY PLAN AND EMERGENCY PROCEDURES

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

SUBPART F: RELEASES FROM SOLID WASTE MANAGEMENT UNITS

SUBPART G: CLOSURE AND POST-CLOSURE

SUBPART H: FINANCIAL REQUIREMENTS

SUBPART I: USE AND MANAGEMENT OF CONTAINERS

SUBPART J: TANK SYSTEMS

SUBPART K: SURFACE IMPOUNDMENTS

SUBPART L: WASTE PILES

SUBPART M: LAND TREATMENT

SUBPART N: LANDFILLS

SUBPART O: INCINERATORS

SUBPART W: DRIP PADS

SUBPART X: MISCELLANEOUS UNITS

SUBPART AA: AIR EMISSION STANDARDS FOR PROCESS VENTS

SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

Appendix A	Recordkeeping Instructions
Appendix B	EPA Report Form and Instructions (Repealed)
Appendix D	Cochran's Approximation to the Behrens-Fisher Student's T-Test
Appendix E	Examples of Potentially Incompatible Waste
Appendix I	Groundwater Monitoring List

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R82-19, 53 PCB 131, at 7 Ill. Reg. 14059, effective October 12, 1983; amended in R84-9 at 9 Ill. Reg. 11964, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1136, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14119, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6138, effective March 24, 1987; amended in R86-28 at 11 Ill. Reg. 8684, effective April 21, 1987; amended in R86-46 at 11 Ill. Reg. 13577, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19397, effective November 12, 1987; amended in R87-39 at 12 Ill. Reg. 13135, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 458, effective December 28, 1988; amended in R89-1 at 13 Ill. Reg. 18527, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14511, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16658, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9654, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14572, effective October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9833, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. , effective ; amended in R92-10 at 16 Ill. Reg. , effective

SUBPART B: GENERAL FACILITY STANDARDS

Section 724.113 General Waste Analysis

a) Analysis:

1) Before an owner or operator treats, stores or disposes of any hazardous wastes, or non-hazardous wastes if applicable under Section 724.213(d), the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, ~~this~~ the analysis must contain all the information which must be known to treat, store or dispose of the waste in accordance with ~~the requirements of~~ this Part ~~or~~ and 35 Ill. Adm. Code 728~~, or with the conditions of a permit issued under 35 Ill. Adm. Code 702, 703 and 705~~.

2) The analysis may include data developed under 35

Ill. Adm. Code 721, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

BOARD NOTE: For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with subsection (a)(1). The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part or all of the information required by subsection (a)(1), except as otherwise specified in 35 Ill. Adm. Code 728.107(b) and (c). If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.

3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

A) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste, or non-hazardous waste if applicable under Section 724.213(d), has changed; and

B) For off-site facilities, when the results of the inspection required in subsection (a)(4) indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4) The owner or operator of an off-site facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

b) The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which it will carry out to comply with subsection (a). The owner or operator shall keep this plan at the facility. At a minimum, the plan must specify:

1) The parameters for which each hazardous waste, or non-hazardous waste if applicable under Section 724.213(d), will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection (a)).

2) The test methods which will be used to test for these parameters.

3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

   A) One of the sampling methods described in 35 Ill. Adm. Code 721.Appendix A; or

   B) An equivalent sampling method.

      BOARD NOTE: See 35 Ill. Adm. Code 720.121 for related discussion.

4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date.

5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.

6) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in Sections 724.117, 724.414, 724.441, 724.934(d) and 724.963(d), and 35 Ill. Adm. Code 728.107. And,

7) For surface impoundments exempted from land disposal restrictions under 35 Ill. Adm. Code 728.104(a), the procedures and schedules for:

   A) The sampling of impoundment contents;

   B) The analysis of test data; and,

   C) The annual removal of residues which are not delisted under 35 Ill. Adm. Code 720.122 or which exhibit a characteristic of hazardous waste, and either:

      i) Do not meet applicable treatment

standards of 35 Ill. Adm. Code 728.Subpart D; or

ii) Where no treatment standards have been established: Such residues are prohibited from land disposal under 35 Ill. Adm. Code 728.132 or 728.139; or such residues are prohibited from land disposal under 35 Ill. Adm. Code 728.133(f).

c) For off-site facilities, the waste analysis plan required in subsection (b) must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

BOARD NOTE: 35 Ill. Adm. Code 703, requires that the waste analysis plan be submitted with Part B of the permit application.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.115 General Inspection Requirements

a) The owner or operator shall conduct inspections often enough to identify problems in time to correct them before they harm human health or the environment. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors and discharges which may be causing, or may lead to:

1) Release of hazardous waste constituents to the environment; or

2) A threat to human health.

b) Inspection schedule.

1) The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting or responding to environmental or human health hazards.

2) The owner or operator shall keep this schedule at the facility.

3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

4) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of ~~possible~~ deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the ~~terms~~ items and frequencies called for in Sections 724.274, ~~724.294,~~ 724.293, 724.295, 724.326, ~~724.353,~~ 724.354, 724.378, 724.403, 724.447, 724.702, 724.933, 724.952, 724.953 and 724.958, where applicable.

BOARD NOTE: 35 Ill. Adm. Code 703 requires the inspection schedule to be submitted with Part B of the permit application. The Agency will evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, the Agency may modify or amend the schedule as may be necessary.

c) The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

d) The owner or operator shall record inspections in an inspection log or summary. The owner or operator shall

keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made and the date and nature of any repairs or other remedial actions.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.119 Construction Quality Assurance Program

a) Construction quality assurance (CQA) program.

1) A CQA program is required for all surface impoundment, waste pile and landfill units that are required to comply with Sections 724.321(c) and (d), 724.351(c) and (d), and 724.401(c) and (d). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

2) The CQA program must address the following physical components, where applicable:

A) Foundations;

B) Dikes;

C) Low-permeability soil liners;

D) Geomembranes (flexible membrane liners);

E) Leachate collection and removal systems and leak detection systems; and

F) Final cover systems.

b) Written CQA plan. The owner or operator of units subject to the CQA program under subsection (a) above must develop and implement a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

1) Identification of applicable units, and a description of how they will be constructed.

2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.

3) A description of inspection and sampling activities for all unit components identified in subsection (a)(2) above, including observations and tests that will be used before, during and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under Section 724.173.

c) Contents of program.

1) The CQA program must include observations, inspections, tests and measurements sufficient to ensure:

A) Structural stability and integrity of all components of the unit identified in subsection (a)(2) above;

B) Proper construction of all components of the liners, leachate collection and removal system, leak detection system and final cover system, according to permit specifications and good engineering practices and proper installation of all components (e.g., pipes) according to design specifications;

C) Conformity of all materials used with design and other material specifications under Sections 724.321, 724.351 and 724.401.

2) The CQA program must include test fills for compacted soil liners, using the same compaction methods as in the full scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of Sections 724.321(c)(1)(A)(ii), 724.351(c)(1)(A)(ii) or 724.401(c)(1)(A)(ii) in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The Agency shall accept an alternative demonstration, in lieu of a test fill,

where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of Sections 724.321(c)(1)(A)(ii), 724.351(c)(1)(A)(ii) or 724.401(c)(1)(A)(ii) in the field.

d) Certification. Waste must not be received in a unit subject to Section 724.119 until the owner or operator has submitted to the Agency by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of Sections 724.321(c) or (d), 724.351(c) or (d), or 724.401(c) or (d); and the procedure in 35 Ill. Adm. Code 703.247(b) has been completed. Documentation supporting the CQA officer's certification must be furnished to the Agency upon request.

(Source: Added at 16 Ill. Reg. , effective)

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

Section 724.173 Operating Record

a) The owner or operator shall keep a written operating record at the facility.

b) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

1) A description and the quantity of each hazardous waste received, and the method or methods and date or dates of its treatment, storage or disposal at the facility as required by Appendix A;

2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;

BOARD NOTE: See Section 724.219 for related requirements.

3) Records and results of waste analyses performed as specified in Sections 724.113, 724.117, 724.414, 724.441, 724.934, 724.963, and in 35 Ill. Adm.

Code 728.104(a) and 728.107;

4) Summary reports and details of all incidents that require implementing the contingency plan as specified in Section 724.156(j);

5) Records and results of inspections as required by Section 724.115(d) (except these data need to be kept only three years);

6) Monitoring, testing or analytical data and corrective action data where required by Subpart F or Sections 724.119, 724.291, 724.293, 724.295, 724.322, 724.323, 724.326, ~~724.353,~~ 724.352 through 724.354, 724.376, 724.378, 724.380, ~~724.403,~~ 724.402 through 724.404, 724.409, 724.447, 724.702, 724.934(c) through (f), 724.935, 724.963(d) through (i) or 724.964.

7) For off-site facilities, notices to generators as specified in Section 724.112(b);

8) All closure cost estimates under Section 724.242 and, for disposal facilities, all post-closure cost estimates under Section 724.244;

9) A certification by the permittee, no less often than annually: that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that the permittee generates, to the degree the permittee determines to be economically practicable; and that the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment;

10) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension of the effective date of any land disposal restriction granted pursuant to 35 Ill. Adm. Code 728.105, a petition pursuant to 35 Ill. Adm. Code 728.106 or a certification under 35 Ill. Adm. Code 728.108, and the applicable notice required of a generator under 35 Ill. Adm. Code 728.107(a);

11) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;

12) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;

13) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107 or 728.108, whichever is applicable; and

14) For an on-site land disposal facility, the information contained in the notice required of the generator or owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107, except for the manifest number, and the certification and demonstration if applicable, required under 35 Ill. Adm. Code 728.108, whichever is applicable.

15) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108; and,

16) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART K: SURFACE IMPOUNDMENTS

Section 724.321 Design and Operating Requirements

a) Any surface impoundment that it not covered by subsection (c) or 35 Ill. Adm. Code 725.321 must have a liner for all portions of the impoundment (except for existing portions of such impoundment). The liner must be designed, constructed and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to

migrate into the liner (but not into the adjacent subsurface soil or groundwater or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with Section 724.328(a)(1). For impoundments that will be closed in accordance with Section 724.328(a)(2), the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be:

1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation;

2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

b) The owner or operator will be exempted from the requirements of subsection (a) above if the Board ~~finds, based on a demonstration by the owner or operator, in a variance and/or site-specific rulemaking,~~ grants an adjusted standard pursuant to 35 Ill. Adm. Code 106.Subpart G. The level of justification is a demonstration by the owner or operator that alternate design ~~and~~or operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see Section 724.193) into the groundwater or surface water at any future time. In deciding whether to grant an ~~exemption~~adjusted standard, the Board will consider:

1) The nature and quantity of the wastes;

2) The proposed alternate design and operation;

3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and groundwater or surface water; and

4) All other factors which would influence the

quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

c) The owner or operator of each new surface impoundment~~, each new surface impoundment unit at an existing facility, each replacement of an existing surface impoundment unit and each lateral expansion of an existing surface impoundment unit, must install two or more liners and a leachate collection system between such liners. The liners and leachate collection system must protect human health and the environment. The requirements of this subsection apply with respect to all waste received after the issuance of the permit for units where Part B of the permit application is received by the Agency or USEPA after November 8, 1984. 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 3-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1 x 10^{-7} centimeter per second.~~ unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system between such liners. "Construction commences" is as defined in 35 Ill. Adm. Code 720.110 under "existing facility".

1) Liner requirements.

A) The liner system must include:

i) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

ii) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 x 10^{-7} cm/sec.

B) The liners must comply with subsections (a)(1), (2) and (3) above.

2) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system (LDS). This LDS must be capable of detecting, collecting and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a LDS in this subsection are satisfied by installation of a system that is, at a minimum:

A) Constructed with a bottom slope of one percent or more;

B) Constructed of granular drainage materials with a hydraulic conductivity of 1 x 10^{-1} cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 x 10^{-4} m^2/sec or more;

C) Constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any

waste cover materials or equipment used at the surface impoundment;

D) Designed and operated to minimize clogging during the active life and post-closure care period; and

E) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

3) The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

4) The owner or operator of a LDS that is not located completely above the seasonal high water table must demonstrate that the operation of the LDS will not be adversely affected by the presence of groundwater.

d) Subsection (c) will not apply if the owner or operator demonstrates to the Agency and the Agency finds for such surface impoundment, that alternative design ~~and~~ or operating practices, together with location characteristics~~, will~~ :

1) Will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as ~~such~~ the liners and leachate collection and removal system~~s.~~ specified in subsection (c) above; and

2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

e) The double liner requirement set forth in subsection (c) may be waived by the Agency for any monofill, if:

1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristic in 35 Ill. Adm. Code 721.124; and

2) Design and location.

A) Liner, location and groundwater monitoring.

i) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this subsection, the term "liner" means a liner designed, constructed, installed and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, groundwater or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of subsection (c) on the basis of a liner designed, constructed, installed and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate post-closure requirements, including but not limited to groundwater monitoring and corrective action;

ii) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 35 Ill. Adm. Code 702.110 and

iii) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits or

B) The owner or operator demonstrates to the Board that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any

future time.

f) The owner or operator of any replacement surface impoundment unit is exempt from subsection (c) above if:

1) The existing unit was constructed in compliance with the design standards of 35 Ill. Adm. Code 724.321(c), (d) and (e), as amended in R86-1, at 10 Ill. Reg. 14119, effective August 12, 1986; and

BOARD NOTE: The cited subsections implemented the design standards of sections 3004 (o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.).

2) There is no reason to believe that the liner is not functioning as designed.

~~f~~ g) 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.

~~g~~ h) 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 unit.

~~h~~ i) The Agency will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this Section are satisfied.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.322 ~~Double-lined Surface Impoundments: Exemption from Subpart F: Ground-water Protection Requirements (Repealed)~~Action Leakage Rate

a) The Agency shall approve an action leakage rate for surface impoundment units subject to Section 724.321(c) or (d). The action leakage rate is the maximum design flow rate that the LDS can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope,

hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Section 724.326(d) to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period and, if the unit is closed in accordance with Section 724.328(b), monthly during the post-closure care period, unless the Agency approves a different frequency pursuant to Section 724.326(d).

(Source: Section repealed at 10 Ill. Reg. 14119, effective August 12, 1986; new Section adopted at 16 Ill. Reg. , effective)

Section 724.323 Response Actions

a) The owner or operator of surface impoundment units subject to Section 724.321(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the LDS exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks, and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipt should cease or be

curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either:

A) Assess the source of liquids and amounts of liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

(Source: Added at 16 Ill. Reg. , effective)

Section 724.326 Monitoring and Inspection

a) During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from Section 724.321(a)) and cover systems (e.g., membranes, sheets, or coatings) 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; and,

3) Severe erosion or other signs of deterioration in dikes or other containment devices.

c) Prior to the issuance of a permit, and after any extended period of time (more than six months) during which the impoundment was not in service, the owner or operator ~~must~~ shall obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish, in particular, that the dike:

1) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and

2) Will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment construction.

d) Monitoring of LDS.

1) An owner or operator required to have a LDS under Section 724.321(c) or (d) shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

2) After the final cover is installed, the amount of liquids removed from each LDS sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for

two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

3) "Pump operating level" is a liquid level proposed by the owner or operator pursuant to 35 Ill. Adm. Code 703.203(b)(5) and approved by the Agency based on pump activation level, sump dimensions and level that avoids backup into the drainage layer and minimizes head in the sump.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.328 Closure and Post-closure Care

a) At closure, the owner or operator ~~must~~ shall:

1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless 35 Ill. Adm. Code 721.103(d) applies; or

2) Closure in place.

A) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

B) ~~Stabilise~~ Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

C) Cover the surface impoundment with a final cover designed and constructed to:

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

ii) Function with minimum maintenance;

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

iv) Accommodate settling and subsidence so that the cover's integrity is maintained; and

v) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

b) If some waste residues or contaminated materials are left in place at final closure, the owner or operator ~~must~~ shall comply with all post-closure requirements contained in Sections 724.217 through 724.220, including maintenance and monitoring throughout the post-closure care period (specified in the permit under Section 724.217). The owner or operator ~~must~~ 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 LDS in accordance with Sections 724.321(c)(2)(D) and (c)(3) and 724.326(d), and comply with all other applicable LDS requirements of this Part;

~~2~~ 3) Maintain and monitor the ~~ground-water~~ groundwater monitoring system and comply with all other applicable requirements of Subpart F; and

~~3~~ 4) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

c) Contingent plans.

1) If an owner or operator plans to close a surface impoundment in accordance with subsection (a)(1), and the impoundment does not comply with the liner requirements of Section 724.321(a) and is not exempt from them in accordance with Section 724.321(b), then:

A) The closure plan for the impoundment under Section 724.212 must include both a plan for complying with subsection (a)(1) and a contingent plan for complying with subsection (a)(2) in case not all contaminated subsoils

can be practicably removed at closure; and

B) The owner or operator ~~must~~ shall prepare a contingent post-closure plan under Section 724.218 for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure.

2) The cost estimates calculated under Sections 724.242 and 724.244 for closure and post-closure care of an impoundment subject to this subsection must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under subsection (a)(1).

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART L: WASTE PILES

Section 724.351 Design and Operating Requirements

a) A waste pile (except for an existing portion of a waste pile) must have:

1) A liner that is designed, constructed and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ~~ground-water~~ groundwater or surface water) during the active life of the facility. The liner must be:

A) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation;

B) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the

liner to prevent failure of the liner due to settlement, compression or uplift; and

C) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained and operated to collect and remove leachate from the pile. The Agency ~~will~~ shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must be:

A) Constructed of materials that are:

i) Chemically ~~resistent~~ resistant to the waste managed in the pile and the leachate expected to be generated; and

ii) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and by any equipment used at the pile; and

B) Designed and operated to function without clogging through the scheduled closure of the waste pile.

b) The owner or operator will be exempted from the requirements of ~~paragraph~~ subsection (a) above if the Board ~~finds, based on a demonstration by the owner or operator, in a variance and/or site-specific rulemaking,~~ grants an adjusted standard pursuant to 35 Ill. Adm. Code 106.Subpart G. The level of justification is a demonstration by the owner or operator that alternate design ~~and~~or operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see Section 724.193) into the groundwater or surface water at any future time. In deciding whether to grant an ~~exemption~~adjusted standard, the Board will consider:

1) The nature and quantity of the wastes;

2) The proposed alternate design and operation;

3) The hydrogeologic setting of the facility, including attenuative capacity and thickness of

the liners and soils present between the pile and groundwater or surface water; and

4) All other factors which ~~would~~ influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

c) The owner or operator of each new waste pile unit on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each replacement of an existing waste pile unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in Section 720.110 under "existing facility".

1) Liners.

A) The liner system must include:

1) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

ii) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than $1X10^{-7}$ cm/sec.

B) The liners must comply with subsections (a)(1)(A), (B) and (C) above.

2) The leachate collection and removal system immediately above the top liner must be designed, constructed, operated and maintained to collect and remove leachate from the waste pile during the active life and post-closure care period. The Agency will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must comply with subsections (c)(3)(C) and (D) below.

3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system (LDS). This LDS must be capable of detecting, collecting and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a LDS in this subsection are satisfied by installation of a system that is, at a minimum:

A) Constructed with a bottom slope of one percent or more;

B) Constructed of granular drainage materials with a hydraulic conductivity of $1X10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of $3X10^{-5}$ m^2/sec or more:

C) Constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and equipment used at the waste pile;

D) Designed and operated to minimize clogging during the active life and post-closure care period; and

E) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to

collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

4) The owner or operator shall collect and remove pumpable liquids in the LDS sumps to minimize the head on the bottom liner.

5) The owner or operator of a LDS that is not located completely above the seasonal high water table shall demonstrate that the operation of the LDS will not be adversely affected by the presence of ground water.

d) The Agency shall approve alternative design or operating practices to those specified in subsection (c) above if the owner or operator demonstrates to the Agency, by way of permit or permit modification application, that such design or operating practices, together with location characteristics:

1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in subsection (c) above; and

2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

e) Subsection (c) above does not apply to monofills that are granted a waiver by the Agency in accordance with Section 724.321(e).

f) The owner or operator of any replacement waste pile unit is exempt from subsection (c) above if:

1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act (42 USC 6901 et seq.); and

BOARD NOTE: The cited provisions required the installation of two or more liners and a leachate collection system above (in the case of a landfill) and between such liners,

including a top liner designed, operated and constructed of materials to prevent the migration of any constituent into such liner during the period the facility remained in operation (including any post-closure monitoring period), and a lower liner to prevent the migration of any constituent through the liner during such period. The lower liner was deemed to satisfy the requirement if it was constructed of at least a 3-foot thick layer of recompacted clay or other natural material with a permeability of no more than 1 x 10^{-7} cm/sec.

2) There is no reason to believe that the liner is not functioning as designed.

~~e~~ g) The owner or operator ~~must~~ shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm.

~~d~~ h) The owner or operator ~~must~~ shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

~~e~~ i) Collection and holding facilities (e.g. tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

~~f~~ j) If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator ~~must~~ shall cover or otherwise manage the pile to control wind dispersal.

~~g~~ k) The Agency ~~will~~ shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of this ~~section~~ Section are satisfied.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.352 ~~Double-lined Piles: Exemption from Subpart F: Ground-water Protection Requirements (Repealed)~~ Action Leakage Rate

a) The Agency shall approve an action leakage rate for surface impoundment units subject to Section 724.351(c) or (d). The action leakage rate is the maximum design flow rate that the LDS can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Section 724.354(c) to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period.

(Source: Section repealed at 10 Ill. Reg. 14119, effective August 12, 1986; new Section adopted at 16 Ill. Reg. , effective)

Section 724.353 ~~Inspection of Liners; Exemption from Subpart F: Ground-water Protection Requirements (Repealed)~~ Response Action Plan

a) The owner or operator of waste pile units subject to Section 724.351(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the LDS exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks,

and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either

A) Assess the source of liquids and amounts of liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

(Source: Section repealed at 10 Ill. Reg. 14119, effective August 12, 1986; new Section adopted at 16 Ill. Reg. effective)

Section 724.354 Monitoring and Inspection

a) During construction or installation, liners (except in the case of existing portions of piles exempt from Section 724.351(a)) and cover systems (e.g., membranes, sheets or coatings) 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 the liner or cover.

b) While a waste pile 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 run-on and run-off control systems;

2) Proper functioning of wind dispersal control systems, where present; or

3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

c) An owner or operator required to have a LDS under Section 724.351(c) shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART N: LANDFILLS

Section 724.401 Design and Operating Requirements

a) Any landfill that is not covered by subsection (c) or 35 Ill. Adm. Code 725.401(a) must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:

1) A liner that is designed, constructed and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or

groundwater or surface water at any time during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner must be:

A) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation;

B) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

C) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained and operated to collect and remove leachate from the landfill. The Agency ~~will~~ shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must be:

A) Constructed of materials that are:

i) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and

ii) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and by any equipment used at the landfill; and

B) Designed and operated to function without clogging through the scheduled closure of the landfill.

b) The owner or operator will be exempted from the requirements of subsection (a) above if the Board ~~finds, based on a demonstration by the owner or operator, in a variance and/or site-specific rulemaking,~~ grants an adjusted standard pursuant to 35 Ill. Adm. Code 106.Subpart G. The level of justification is a demonstration by the owner or operator that alternative design ~~and~~ or operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see Section 724.193) into the groundwater or surface water at any future time. In deciding whether to grant an ~~exemption~~ adjusted standard, the Board will consider:

1) The nature and quantity of the wastes;

2) The proposed alternate design and operation;

3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and groundwater or surface water; and

4) All other factors which ~~would~~ influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

c) The owner or operator of each new landfill~~, each new landfill unit at an existing facility, each replacement of an existing landfill unit and each lateral expansion of an existing landfill unit, must install two or more liners and a leachate collection system above and between the liners. The liners and leachate collection systems must protect human health and the environment. This subsection applies with respect to all waste received after issuance of the permit for units where Part B of the permit application is received by the Agency or USEPA after November 8, 1984. 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 3-foot thick layer of recompacted clay or~~

~~other natural material with a permeability of no more than 1 x 10^{-7} centimeter per second.~~ unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in 35 Ill. Adm. Code 720.110 under "existing facility".

1) Liner requirements.

A) The liner system must include:

i) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

ii) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 X 10^{-7} cm/sec.

B) The liners must comply with subsections (a)(1)(A), (B) and (C) above.

2) The leachate collection and removal system immediately above the top liner must be designed, constructed, operated and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The Agency will specify design and operating conditions in the permit to ensure that the

leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must comply with subsections (c)(3)(C) and (D) below.

3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system (LDS). This LDS must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a LDS in this subsection are satisfied by installation of a system that is, at a minimum:

A) Constructed with a bottom slope of one percent or more;

B) Constructed of granular drainage materials with a hydraulic conductivity of $1X10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of $3 X 10^{-5}$ m^2/sec or more;

C) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and equipment used at the landfill;

D) Designed and operated to minimize clogging during the active life and post-closure care period; and

E) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

4) The owner or operator shall collect and remove pumpable liquids in the LDS sumps to minimize the head on the bottom liner.

5) The owner or operator of a LDS that is not located completely above the seasonal high water table shall demonstrate that the operation of the LDS will not be adversely affected by the presence of ground water.

d) Subsection (c) will not apply if the owner or operator demonstrates to the Agency, and the Agency finds for such landfill, that alternative design ~~and~~ or operating practices, together with location characteristics~~, will~~ :

1) Will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as ~~such~~ the liners and leachate collection and removal systems, specified in subsection (c) above; and

2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

e) The ~~double liner requirement~~ Agency shall not require a double liner as set forth in subsection (c) ~~be waived by the Agency~~ for any monofill, if:

1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which ~~would~~ render the wastes hazardous for reasons other than the toxicity characteristics in 35 Ill. Adm. Code 721.124, with USEPA hazardous waste numbers D004 through D017; and

2) No migration demonstration.

A) Design and location requirements.

i) The monofill has at least one liner for which there is no evidence that such liner is leaking.

ii) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 35 Ill. Adm. Code 702.110.

iii) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with RCRA permits; or

B) The owner or operator demonstrates to the Board that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

f) The owner or operator of any replacement landfill unit is exempt from subsection (c) above if:

1) The existing unit was constructed in compliance with the design standards of 35 Ill. Adm. Code 724.401(c), (d) and (e), as amended in R86-1, at 10 Ill. Reg. 14119, effective August 12, 1986; and

BOARD NOTE: The cited subsections implemented the design standards of sections 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.).

2) There is no reason to believe that the liner is not functioning as designed.

~~f~~ g) The owner or operator ~~must~~ shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

~~g~~ h) The owner or operator ~~must~~ shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24 hour, 25-year storm.

~~h~~ i) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

~~i~~ j) If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator ~~must~~ shall cover or otherwise manage the landfill to control wind dispersal.

~~j~~ k) The Agency ~~will~~ shall specify in the permit all design and operating practices that are necessary to ensure

that the requirements of this Section are satisfied.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.402 ~~Double-lined Landfills: Exemption from Subpart F: Ground-water Protection Requirements (Repealed)~~ Action Leakage Rate

a) The Agency shall approve an action leakage rate for landfill units subject to Section 724.401(c) or (d). The action leakage rate is the maximum design flow rate that the LDS can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

b) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Section 724.403(c) to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the post-closure care period, unless the Agency approves a different frequency pursuant to Section 724.403(c)(2).

(Source: Section repealed at 10 Ill. Reg. 14119, effective August 12, 1986; new Section adopted at 16 Ill. Reg. , effective)

Section 724.403 Monitoring and Inspection

a) During construction or installation, liners (except in the case of existing portions of landfills exempt from Section 724.401(a)) and cover systems (e.g., membranes, sheets or coatings) 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 or 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 the liner or cover.

b) While a landfill 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 run-on and run-off control systems;

2) Proper functioning of wind dispersal control systems, where present; and

3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

c) Monitoring of LDS.

1) An owner or operator required to have a LDS under Section 724.401(c) or (d) shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

2) After the final cover is installed, the amount of liquids removed from each LDS sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

3) "Pump operating level" is a liquid level proposed by the owner or operator pursuant to 35 Ill. Adm. Code 703.207(b)(1)(E) and approved by the Agency

based on pump activation level, sump dimensions and level that avoids backup into the drainage layer and minimizes head in the sump.

(Source: Amended at 16 Ill. Reg. , effective)

Section 724.404 Response Actions

a) The owner or operator of landfill units subject to Section 724.401(c) or (d) shall have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the LDS exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks, and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either:

A) Assess the source of liquids and amounts of liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

(Source: Added at 16 Ill. Reg. , effective)

Section 724.410 Closure and Post-closure Care

a) At final closure of the landfill or upon closure of any cell, the owner or operator ~~must~~ shall cover the landfill or cell with a final cover designed and constructed to:

1) Provide long-term minimization of migration of liquids through the closed landfill;

2) Function with minimum maintenance;

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

4) Accommodate settling and subsidence so that the cover's integrity is maintained; and

5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

b) After final closure, the owner or operator ~~must~~ shall comply with all post-closure requirements contained in Sections 724.217 through 724.220, including maintenance and monitoring throughout the post-closure care period (specified in the permit under Section 724.217). The owner or operator ~~must~~ 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) Continue to operate the leachate collection and removal system until leachate is no longer detected;

3) Maintain and monitor the LDS in accordance with Sections 724.401(c)(3)(D) and (c)(4) and 724.403(c), and comply with all other applicable LDS requirements of this Part;

~~3~~ 4) Maintain and monitor the ~~ground-water~~ groundwater monitoring system and comply with all other applicable requirements of Subpart F;

~~4~~ 5) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and

~~5~~ 6) Protect and maintain surveyed benchmarks used in complying with Section 724.409.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART W: DRIP PADS

Section 724.673 Design and operating requirements

a) Drip pads must:

1) Not be constructed of earthen materials, wood or asphalt, unless the asphalt is structurally supported;

2) Be sloped to free-drain to the associated collection system treated wood drippage, rain, other waters, or solutions of drippage and water or other wastes;

3) Have a curb or berm around the perimeter;

4) Be impermeable, e.g., concrete pads must be sealed, coated or covered with an impermeable material such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials or other wastes while being routed to an associated collection system; and

BOARD NOTE: The requirement that new drip pads be impermeable, e.g., that new drip pads be sealed, coated or covered with an impermeable material, is administratively stayed. The stay will remain in effect until further administrative action is taken. The requirement that existing drip pads be impermeable, e.g., that drip pads be sealed, coated or covered with an impermeable material, is administratively stayed. The stay will remain in effect until October 30, 1992.

5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of installation and the stress of daily operations, e.g., variable and moving loads such as vehicle traffic, movement of wood, etc.

BOARD NOTE: In judging the structural integrity requirement of this subsection, the Agency should generally consider applicable standards established by professional organizations generally recognized by the industry, including ACI 318 or ASTM C94, incorporated by reference in 35 Ill. Adm. Code 720.111.

b) A new drip pad or an existing drip pad, after the deadline established in Section 724.671(b), must have:

1) A synthetic liner installed below the drip pad that is designed, constructed and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:

A) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of

installation and the stress of daily operation (including stresses from vehicular traffic on the drip pad);

B) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

C) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:

A) Constructed of materials that are:

i) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and

ii) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad; and

B) Designed and operated to function without clogging through the scheduled closure of the drip pad; and

C) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

c) Drip pads must be maintained such that they remain free of cracks, gaps, corrosion or other deterioration that could cause hazardous waste to be released from the drip pad.

BOARD NOTE: See subsection (m) for remedial action required if deterioration or leakage is detected.

d) The drip pad and associated collection system must be designed and operated to convey, drain and collect liquid resulting from drippage or precipitation in order to prevent run-off.

e) Unless the drip pad is protected by a structure, as described in Section 724.670(b), the owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-on that might enter the system.

f) Unless the drip pad is protected by a structure or cover, as described in Section 724.670(b), the owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

g) The drip pad must be evaluated to determine that it meets the requirements of subsections (a) through (f). The owner or operator shall obtain a statement from an independent, qualified, registered professional engineer certifying that the drip pad design meets the requirements of this Section.

h) Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

i) The drip pad surface must be cleaned thoroughly at least once every seven days such that accumulated residues of hazardous waste or other materials are removed, using an appropriate and effective cleaning technique, including but not limited to, rinsing, washing with detergents or other appropriate solvents, or steam cleaning. The owner or operator shall document, in the facility's operating log, the date and time of each cleaning and the cleaning procedure used.

j) Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes must be held on the drip pad until drippage has ceased. The owner or operator shall maintain records sufficient to document that all treated wood is held on the pad, in accordance with this Section, following treatment.

l) Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise managed as soon as possible after storms to maintain

design capacity of the system.

m) Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

1) Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage in the leak detection system), the owner or operator shall:

A) Enter a record of the discovery in the facility operating log;

B) Immediately remove from service the portion of the drip pad affected by the condition;

C) Determine what steps must be taken to repair the drip pad, clean up any leakage from below the drip pad, and establish a schedule for accomplishing the clean up and repairs;

D) Within 24 hours after discovery of the condition, notify the Agency of the condition and, within 10 working days, provide written notice to the Agency with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

2) The Agency shall: review the information submitted; make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean up are complete; and notify the owner or operator of the determination and the underlying rationale in writing.

3) Upon completing all repairs and clean up, the owner or operator shall notify the Agency in writing and provide a certification, signed by an independent, qualified, registered professional engineer, that the repairs and clean up have been completed according to the written plan submitted in accordance with subsection (m)(1)(D) above.

n) If a permit is necessary, the Agency shall specify in the permit all design and operating practices that are

necessary to ensure that the requirements of this Section are satisfied.

o) The owner or operator shall maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices and a description of treated wood storage and handling practices.

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 725
INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

SUBPART A: GENERAL PROVISIONS

SUBPART B: GENERAL FACILITY STANDARDS

SUBPART C: PREPAREDNESS AND PREVENTION

SUBPART D: CONTINGENCY PLAN AND EMERGENCY PROCEDURES

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

SUBPART F: GROUNDWATER MONITORING

SUBPART G: CLOSURE AND POST-CLOSURE

SUBPART H: FINANCIAL REQUIREMENTS

SUBPART I: USE AND MANAGEMENT OF CONTAINERS

SUBPART J: TANK SYSTEMS

SUBPART K: SURFACE IMPOUNDMENTS

SUBPART L: WASTE PILES

SUBPART M: LAND TREATMENT

SUBPART N: LANDFILLS

SUBPART O: INCINERATORS

SUBPART P: THERMAL TREATMENT

SUBPART Q: CHEMICAL, PHYSICAL AND BIOLOGICAL TREATMENT

SUBPART R: UNDERGROUND INJECTION

SUBPART W: DRIP PADS

SUBPART AA: AIR EMISSION STANDARDS FOR PROCESS VENTS

SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

AUTHORITY: Implementing Section 22.4 and authorized by Section

27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111-1/2, pars. 1022.4 and 1027).

SOURCE: Adopted in R81-22, 43 PCB 427, at 5 Ill. Reg. 9781, effective as noted in 35 Ill. Adm. Code 700.106; amended and codified in R81-22, 45 PCB 317, at 6 Ill. Reg. 4828, effective as noted in 35 Ill. Adm. Code 700.106; amended in R82-18, 51 PCB 831, at 7 Ill. Reg. 2518, effective February 22, 1983; amended in R82-19, 53 PCB 131, at 7 Ill. Reg. 14034, effective October 12, 1983; amended in R84-9, at 9 Ill. Reg. 11869, effective July 24, 1985; amended in R85-22 at 10 Ill. Reg. 1085, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14069, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6044, effective March 24, 1987; amended in R86-46 at 11 Ill. Reg. 13489, effective August 4, 1987; amended in R87-5 at 11 Ill. Reg. 19338, effective November 10, 1987; amended in R87-26 at 12 Ill. Reg. 2485, effective January 15, 1988; amended in R87-39 at 12 Ill. Reg. 13027, effective July 29, 1988; amended in R88-16 at 13 Ill. Reg. 437, effective December 28, 1988; amended in R89-1 at 13 Ill. Reg. 18354, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14447, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16498, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9398, effective June 17, 1991; amended in R91-1 at 15 Ill. Reg. 14534, effective October 1, 1991; amended in R91-13 at 16 Ill. Reg. 9578, effective June 9, 1992; amended in R92-1 at 16 Ill. Reg. , effective ; amended in R92-10 at 16 Ill. Reg. , effective

SUBPART B: GENERAL FACILITY STANDARDS

Section 725.113 General Waste Analysis

a) Waste analysis:

1) Before an owner or operator treats, stores or disposes of any hazardous wastes, or non-hazardous wastes if applicable under Section 725.213(d), the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, ~~this~~ the analysis must contain all the information which must be known to treat, store or dispose of the waste in accordance with ~~the requirements of~~ this Part and 35 Ill. Adm. Code 728.

2) The analysis may include data developed under 35 Ill. Adm. Code 721 and existing published or documented data on the hazardous waste or on waste generated from similar processes.

BOARD NOTE: For example, the facility's

record of analyses performed on the waste before the effective date of these regulations or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility may be included in the data base required to comply with subsection (a)(1), above, except as otherwise specified in 35 Ill. Adm. Code 728.107(b) and (c). The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part or all of the information required by subsection (a)(1), above. If the generator does not supply the information and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.

3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

A) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste, or non-hazardous waste if applicable under Section 725.213(d), has changed; and

B) For off-site facilities, when the results of the inspection required in subsection (a)(4), below, indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4) The owner or operator of an off-site facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

b) The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which the owner or operator will carry out to comply with subsection (a), above. The owner or operator shall keep this plan at the facility. At a minimum, the plan must specify:

1) The parameters for which each hazardous waste, or

non-hazardous waste if applicable under Section 725.213(d), will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection (a), above.

2) The test methods which will be used to test for these parameters.

3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

   A) One of the sampling methods described in 35 Ill. Adm. Code 721.Appendix A or

   B) An equivalent sampling method.

      BOARD NOTE: See 35 Ill. Adm. Code 720.120(c) for related discussion.

4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date.

5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.

6) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in Sections 725.300, 725.325, 725.352, 725.373, 725.414, 725.441, 725.475, 725.502, 725.934(d) and 725.963(d), and 35 Ill. Adm. Code 728.107. And,

7) For surface impoundments exempted from land disposal restrictions under 35 Ill. Adm. Code 728.104(a), the procedures and schedules for:

   A) The sampling of impoundment contents;

   B) The analysis of test data; and,

   C) The annual removal of residues which are not delisted under 35 Ill. Adm. Code 720.122 or which exhibit a characteristic of hazardous waste, and either:

      i) Do not meet applicable treatment

standards of 35 Ill. Adm. Code 728.Subpart D; or

ii) Where no treatment standards have been established: Such residues are prohibited from land disposal under 35 Ill. Adm. Code 728.132 or 728.139; or such residues are prohibited from land disposal under 35 Ill. Adm. Code 728.133(f).

c) For off-site facilities, the waste analysis plan required in subsection (b), above, must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.115 General Inspection Requirements

a) The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors and discharges which may be causing -- or may lead to -- the conditions listed below. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

1) Release of hazardous waste constituents to the environment or

2) A threat to human health.

b) Written schedule.

1) The owner or operator shall develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment,

security devices and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting or responding to environmental or human health hazards.

2) The owner or operator shall keep this schedule at the facility.

3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

4) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of ~~possible~~ deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, ~~or~~ malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in Sections 725.274, 725.293, 725.295, 725.326, 725.360, 725.378, 725.404, 725.447, 725.477, 725.503, 725.933, 725.952, 725.953 and 725.958, where applicable.

c) The owner or operator shall remedy any deterioration or malfunction of equipment or structure which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

d) The owner or operator shall record inspections in an inspection log or summary. The owner or operator shall keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made and the date and nature of any repairs or other remedial actions.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.119 Construction Quality Assurance Program

a) CQA program.

1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile and landfill units that are required to comply with Sections 725.321(a), 725.354 and 725.401(a). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in this Part. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

2) The CQA program must address the following physical components, where applicable:

A) Foundations;

B) Dikes;

C) Low-permeability soil liners;

D) Geomembranes (flexible membrane liners);

E) Leachate collection and removal systems and leak detection systems; and

F) Final cover systems.

b) Written CQA plan. Before construction begins on a unit subject to the CQA program under subsection (a) above, the owner or operator shall develop a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

1) Identification of applicable units and a description of how they will be constructed.

2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.

3) A description of inspection and sampling activities for all unit components identified in subsection (a)(2) above, including observations and tests that will be used before, during and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials;

plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under Section 725.173.

c) Contents of program.

1) The CQA program must include observations, inspections, tests and measurements sufficient to ensure:

A) Structural stability and integrity of all components of the unit identified in subsection (a)(2) above;

B) Proper construction of all components of the liners, leachate collection and removal system, leak detection system and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;

C) Conformity of all materials used with design and other material specifications under 35 Ill. Adm. Code 724.321, 724.351 and 724.401.

2) The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full-scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of 35 Ill. Adm. Code 724.321(c)(1), 724.351(c)(1) or 724.401(c)(1) in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The test fill requirement is waived where data are sufficient to show that a constructed soil liner meets the hydraulic conductivity requirements of 35 Ill. Adm. Code 724.321(c)(1), 724.354(c)(1) or 724.401(c)(1) in the field.

d) Certification. The owner or operator of units subject to this Section must submit to the Agency by certified mail or hand delivery, at least 30 days prior to receiving waste, a certification signed by the CQA officer that the CQA plan has been successfully carried out and that the unit meets the requirements of Sections 725.321(a), 725.354 or 725.401(a). The owner or operator may receive waste in the unit after 30 days from the Agency's receipt of the CQA certification unless the Agency determines in writing that the

construction is not acceptable, or extends the review period for a maximum of 30 more days, or seeks additional information from the owner or operator during this period. Documentation supporting the CQA officer's certification must be furnished to the Agency upon request.

e) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Added at 16 Ill. Reg. , effective)

SUBPART E: MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

Section 725.173 Operating Record

a) The owner or operator shall keep a written operating record at the facility.

b) The following information must be recorded as it becomes available and maintained in the operating record until closure of the facility.

1) A description and the quantity of each hazardous waste received and the method or methods and date or dates of its treatment, storage or disposal at the facility as required by Appendix A;

2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities this information must include cross-references to specific manifest document numbers if the waste was accompanied by a manifest;

BOARD NOTE: See Sections 725.219, 725.379 and 725.409 for related requirements.

3) Records and results of waste analysis and trial tests performed as specified in Sections 725.113, 725.300, 725.325, 725.352, 725.373, 725.414, 725.441, 725.475, 725.502, 725.934 and 725.963 and 35 Ill. Adm. Code 728.104(a) and 728.107;

4) Summary reports and details of all incidents that require implementing the contingency plan as specified in Section 725.156(j);

5) Records and results of inspections as required by Sections 725.115(d) (except these data need be kept only three years);

6) Monitoring, testing or analytical data and corrective action data where required by Subpart F or Sections 725.119, 725.190, 725.194, 725.291, 725.293, 725.295, 725.322, 725.323, 725.326, 725.355, 725.359, 725.360, 725.376, 725.378, 725.380(d)(1), 725.402 through 725.404, 725.447, 725.477, 725.934(c) through (f), 725.935, 725.963(d) through (i) ~~and~~ or 725.964;

BOARD NOTE: As required by Section 725.194, monitoring data at disposal facilities must be kept throughout the post-closure period.

7) All closure cost estimates under Section 725.242 and, for disposal facilities, all post-closure cost estimates under Section 725.244;

8) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension of the effective date of any land disposal restriction granted pursuant to 35 Ill. Adm. Code 728.105, a petition pursuant to 35 Ill. Adm. Code 728.106 or a certification under 35 Ill. Adm. Code 728.108, and the applicable notice required of a generator under 35 Ill. Adm. Code 728.107(a);

9) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;

10) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108;

11) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107 or 728.108, whichever is applicable; and

12) For an on-site land disposal facility, the

information contained in the notice required of the generator or owner or operator of a treatment facility under 35 Ill. Adm. Code 728.107, except for the manifest number, and the certification and demonstration, if applicable, required under 35 Ill. Adm. Code 728.108, whichever is applicable.

13) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108; and,

14) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required of the generator or the owner or operator under 35 Ill. Adm. Code 728.107 or 728.108.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART K: SURFACE IMPOUNDMENTS

Section 725.321 Design and Operating Requirements

a) ~~The owner or operator of a surface impoundment must install two or more liners and leachate collection system in accordance with 35 Ill. Adm. Code 724.321(c), with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.~~ The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system between such liners, and operate the leachate collection and removal system, in accordance with 35 Ill. Adm. Code 724.321(c), unless exempted under 35 Ill. Adm. Code 724.321(d), (e) or (f). "Construction commences" is as defined in 35 Ill. Adm. Code 720.110 under "existing facility."

b) The owner or operator of each unit referred to in subsection (a) ~~must~~ shall notify the Agency at least sixty days prior to receiving waste. The owner or

operator of each facility submitting notice ~~must~~ shall file a Part B application within six months of the receipt of such notice.

c) ~~Subsection (a) will not apply if the owner or operator demonstrates to the Agency and the Agency finds for such surface impoundment, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as such liners and leachate collection systems.~~ The owner or operator of any replacement surface impoundment unit is exempt from subsection (a) above if:

1) The existing unit was constructed in compliance with the design standards of 35 Ill. Adm. Code 724.321(c), (d) and (e), as amended in R86-1, at 10 Ill. Reg. 14119, effective August 12, 1986; and

BOARD NOTE: The cited subsections implemented the design standards of sections 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.).

2) There is no reason to believe that the liner is not functioning as designed.

d) The ~~double liner requirement~~ Agency shall not require a double liner as set forth in subsection (a) ~~may be waived by the Agency~~ for any monofill, if:

1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which ~~would~~ render the wastes hazardous for reasons other than the toxicity characteristic in 35 Ill. Adm. Code 721.124, with USEPA hazardous waste numbers D004 through D017; and

2) No migration demonstration.

A) Design and location requirements.

i) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this subsection the term "liner" means a liner designed, constructed, installed and operated to prevent hazardous waste

from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, groundwater or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of subsection (a), of a liner designed, constructed, installed and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment the owner or operator ~~must~~ shall remove or decontaminate all waste residues, all contaminated liner material and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment ~~must~~ shall comply with appropriate post-closure requirements, including but not limited to groundwater monitoring and corrective action;

ii) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 35 Ill. Adm. Code 702.110); and

iii) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with RCRA permits; or,

B) The owner or operator demonstrates to the Board that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

e) In the case of any unit in which the liner and leachate collection system ~~has~~ have been installed pursuant to the requirements of subsection (a), and in good faith compliance with subsection (a) and with guidance documents governing liners and leachate collection systems under subsection (a), ~~no~~ the Agency shall not require a liner or leachate collection system which is

different from that which was so installed pursuant to subsection (a) ~~will be required for such unit by the Agency~~ when issuing the first permit to such facility, except that the Agency ~~will not be~~ is not precluded from requiring installation of a new liner when the Agency finds that any liner installed pursuant to the requirements of subsection (a) is leaking.

f) A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action or a storm. Except as provided in subsection (g), below, there must be at least 60 centimeters (2 feet) of freeboard.

g) A freeboard level less than 60 centimeters (two feet) may be maintained if the owner or operator obtains certification by a qualified engineer that alternate design features or operating plans will, to the best of the engineer's knowledge and opinion, prevent overtopping of the dike. The certification, along with a written identification of alternate design features or operating plans preventing overtopping, must be maintained at the facility.

BOARD NOTE: Any point source discharge from a surface impoundment to waters of the State is subject to the requirements of Section 12 of the Environmental Protection Act. Spills may be subject to Section 311 of the Clean Water Act (33 U.S.C. 1251 et seq.)

~~f~~ h) Refusal to grant an exemption or waiver, or grant with conditions, may be appealed to the Board.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.322 ~~General Operating Requirements~~ Action Leakage Rate

~~a) A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action or a storm. Except as provided in paragraph (b), there must be at least 60 centimeters (2 feet) of freeboard.~~

~~b) A freeboard level less than 60 centimeters (two feet) may be maintained if the owner or operator obtains certification by a qualified engineer that alternate design features or operating plans will, to the best of the engineer's knowledge and opinion, prevent overtopping of the dike. The certification, along with~~

~~a written identification of alternate design features or operating plans preventing overtopping, must be maintained at the facility.~~

~~BOARD NOTE: Any point source discharge from a surface impoundment to waters of the state is subject to the requirements of Section 12 of the Illinois Environmental Protection Act, as amended. Spills may be subject to Section 311 of the Clean Water Act.~~

a) The owner or operator of surface impoundment units subject to Section 725.321(a) shall submit a proposed action leakage rate to the Agency when submitting the notice required under Section 725.321(b). Within 60 days of receipt of the notification, the Agency will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this Section; or extend the review period for up to 30 days. If no action is taken by the Agency before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

b) The Agency shall approve an action leakage rate for surface impoundment units subject to Section 725.321(a). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

c) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Section 725.326(b) to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period and, if the unit is closed in accordance with Section 725.328(a)(2), monthly during the post-closure care period, unless the Agency approves a different

frequency pursuant to Section 725.326(b).

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.323 ~~Containment System~~ Response Actions

~~All earthen dikes must have a protective cover, such as grass, shale or rock to minimize wind and water erosion and to preserve their structural integrity.~~

a) The owner or operator of surface impoundment units subject to Section 725.321(a) shall submit a response action plan to the Agency when submitting the proposed action leakage rate under Section 725.322. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the LDS exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks, and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations

specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either:

A) Assess the source of liquids and amounts of liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.324 Containment System

All earthen dikes must have a protective cover, such as grass, shale or rock to minimize wind and water erosion and to preserve their structural integrity.

BOARD NOTE: This Section is derived from 40 CFR 265.223, which was inadvertently repealed at 57 Fed. Reg. 3486, January 29, 1992.

(Source: Added at 16 Ill. Reg. , effective)

Section 725.326 Monitoring and Inspections

a) The owner or operator ~~must~~ shall inspect:

~~a~~ 1) The freeboard level at least once each operating day to ensure compliance with ~~§~~ Section 725.322; and

~~b~~ 2) The surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration or failures in the impoundment.

~~COMMENT~~ BOARD NOTE: As required by ~~§~~ Section 725.115(c), the owner or operator ~~must~~ shall remedy any deterioration or malfunction ~~he~~ the owner or operator finds.

b) LDS.

1) An owner or operator required to have a LDS under Section 725.321(a) shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

2) After the final cover is installed, the amount of liquids removed from each LDS sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Agency based on pump activation level, sump dimensions and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed "pump operating level" will be in accordance with Section 725.322(a).

c) Final Agency determinations pursuant to this Section

are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.328 Closure and Post-closure Care

a) At closure, the owner or operator shall:

1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste or leachate, and manage them as hazardous waste unless 35 Ill. Adm. Code 721.103(d) applies; or

2) Close the impoundment and provide post-closure care for a landfill under Subpart G and Section 725.410, including the following:

A) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

B) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

C) Cover the surface impoundment with a final cover designed and constructed to:

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

ii) Function with minimum maintenance;

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

iv) Accommodate settling and subsidence so that the cover's integrity is maintained; and

v) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

b) In addition to the requirements of Subpart G and Section 725.410, during the post-closure care period

the owner or operator of a surface impoundment in which wastes, waste residues or contaminated materials remain after closure in accordance with subsection (a)(2) shall:

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

2) Maintain and monitor the LDS in accordance with 35 Ill. Adm. Code 724.321(c)(2)(D) and (c)(3) and 725.326(b) and comply with all other applicable LDS requirements of this Part;

~~2~~ 3) Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of Subpart F; and

~~3~~ 4) Prevent run-on and run-off from eroding or damaging the final cover.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART L: WASTE PILES

Section 725.354 Design and Operating Requirements

The owner or operator of ~~a waste pile is subject to the requirements for liners and leachate collection systems or equivalent protection provided in 35 Ill. Adm. Code 724.351, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.~~ each new waste pile on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each such replacement of an existing waste pile unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system above and between such liners and operate the leachate collection and removal systems, in accordance with 35 Ill. Adm. Code 724.351(c), unless exempted under 35 Ill. Adm. Code 724.351(d), (e) or (f); and shall comply with the procedures of Section 725.321(b). "Construction commences" is as defined in 35 Ill. Adm. Code 720.110 under "existing facility". The owner or operator of each unit referred to in this Section shall notify the Agency at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice shall file a Part B application within six months of the receipt of such notice.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.355 Action Leakage Rates

a) The owner or operator of waste pile units subject to Section 725.354 shall submit a proposed action leakage rate to the Agency when submitting the notice required under Section 725.354. Within 60 days of receipt of the notification, the Agency will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section; or extend the review period for up to 30 days. If no action is taken by the Agency before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

b) The Agency shall approve an action leakage rate for surface impoundment units subject to Section 725.354. The action leakage rate is the maximum design flow rate that the LDS can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

c) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly flow rate from the monitoring data obtained under Section 725.360, to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period.

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Added at 16 Ill. Reg. , effective)

Section 725.359 Response Actions

a) The owner or operator of waste pile units subject to Section 725.354 shall submit a response action plan to the Agency when submitting the proposed action leakage rate under Section 725.355. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the leak determination system exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks, and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipts should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either:

A) Assess the source of liquids and amounts of

liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Added at 16 Ill. Reg. , effective
)

Section 725.360 Monitoring and Inspection

An owner or operator required to have a LDS under Section 725.354 shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

(Source: Added at 16 Ill. Reg. , effective
)

SUBPART N: LANDFILLS

Section 725.401 Design Requirements

a) The owner or operator of ~~a landfill must install two or more liners and leachate collection systems above and between such liners in accordance with 35 Ill. Adm. Code 724.401, with respect to each new unit, replacement of an existing unit or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.~~ each new landfill unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992, shall install two or more liners and a leachate collection and removal system above and between such liners, and operate the leachate collection and removal systems, in accordance with 35 Ill. Adm. Code 724.401(c), unless

exempted by 35 Ill. Adm. Code 724.401(d), (e) or (f). "Construction commences" is as defined in 35 Ill. Adm. Code 720.110 under "existing facility".

b) The owner or operator of each unit referred to in subsection (a) ~~must~~ shall notify the Agency at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice ~~must~~ shall file a Part B application within six months of the receipt of such notice.

c) ~~Subsection (a) will not apply if the owner or operator demonstrates to the Agency and the Agency finds for such landfill, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the groundwater or surface water at least as effectively as such liners and leachate collection systems.~~ The owner or operator of any replacement landfill unit is exempt from subsection (a) above if:

1) The existing unit was constructed in compliance with the design standards of 35 Ill. Adm. Code 724.401(c), (d) and (e), as amended in R86-1, at 10 Ill. Reg. 14119, effective August 12, 1986; and

BOARD NOTE: The cited subsections implemented the design standards of sections 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.).

2) There is no reason to believe that the liner is not functioning as designed.

d) The ~~double liner requirement~~ Agency shall not require a double liner as set forth in subsection (a) ~~may be waived by the Agency~~ for any monofill, if:

1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such ~~wastes do~~ waste does not contain constituents which ~~would~~ render the wastes hazardous for reasons other the ~~EP toxicity characteristics in 35 Ill. Adm. Code 721.124~~ toxicity characteristic in 35 Ill. Adm. Code 721.124, with hazardous waste number D004 through D017; and

2) Alternative demonstration.

A) Liner and location requirements.

i) The monofill has at least one liner for which there is no evidence that such liner is leaking~~+~~ ;

ii) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 35 Ill. Adm. Code 702.110); and

iii) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with RCRA permits; or

B) The owner or operator demonstrates to the Board that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater ~~of~~ or surface water at any future time.

e) In the case of any unit in which the liner and leachate collection system ~~has~~ have been installed pursuant to the requirements of subsection (a), and in good faith compliance with subsection (a) and with guidance documents governing liners and leachate collection systems under subsection (a), ~~no~~ the Agency shall not require a liner or leachate collection system which is different from that which was so installed pursuant to subsection (a) ~~will be required for such unit by the Agency~~ when issuing the first permit to such facility, except that the Agency ~~will not be~~ is not precluded from requiring installation of a new liner when the Agency finds that any liner installed pursuant to the requirements of subsection (a) is leaking.

f) The owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

g) The owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24 hour, 25-year storm.

h) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

i) The owner or operator of a landfill containing hazardous waste which is subject to dispersal by wind shall cover or otherwise manage the landfill so that wind dispersal of the hazardous waste is controlled.

BOARD NOTE: As required by Section 725.113, the waste analysis plan must include analyses needed to comply with Sections 725.412, 725.413 and 725.414. As required by Section 725.173, the owner or operator shall place the results of these analyses in the operating record of the facility.

~~f~~ j) Refusal to grant an exemption or waiver, or grant with conditions, may be appealed to the Board.

(Source: Amended at 16 Ill. Reg. , effective)

Section 725.402 ~~General Operating Requirements~~ Action Leakage Rate

~~a) The owner or operator must design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.~~

~~b) The owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.~~

~~c) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.~~

~~d) The owner or operator of a landfill containing hazardous waste which is subject to dispersal by wind must cover or otherwise manage the landfill so that wind dispersal of the hazardous waste is controlled.~~

~~BOARD NOTE: As required by Section 725.113, the waste analysis plan must include analyses needed to comply with Sections 725.412, 725.413 and 725.414. As required by Section 725.173, the owner or operator must place the results of these analyses in the operating record of the facility.~~

a) The owner or operator of landfill units subject to Section 725.401(a) shall submit a proposed action leakage rate to the Agency when submitting the notice

required under Section 725.401(b). Within 60 days of receipt of the notification, the Agency will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section; or extend the review period for up to 30 days. If no action is taken by the Agency before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

b) The Agency shall approve an action leakage rate for landfill units subject to Section 725.401(a). The action leakage rate is the maximum design flow rate that the LDS can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

c) To determine if the action leakage rate has been exceeded, the owner or operator shall convert the weekly or monthly flow rate from the monitoring data obtained under Section 725.404 to an average daily flow rate (gallons per acre per day) for each sump. The average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the post-closure care period unless the Agency approves a different period under Section 725.404(b).

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: **Amended at 16 Ill. Reg. , effective**)

Section 725.403 Response Actions

a) The owner or operator of landfill units subject to Section 725.401(a) shall submit a response action plan to the Agency when submitting the proposed action leakage rate under Section 725.402. The response

action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b) below.

b) If the flow rate into the LDS exceeds the action leakage rate for any sump, the owner or operator shall:

1) Notify the Agency in writing of the exceedence within 7 days of the determination;

2) Submit a preliminary written assessment to the Agency within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size and cause of any leaks, and short-term actions taken and planned;

3) Determine to the extent practicable the location, size and cause of any leak;

4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs or controls, and whether or not the unit should be closed;

5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Agency the results of the determinations specified in subsections (b)(3), (4) and (5) above, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the LDS exceeds the action leakage rate, the owner or operator shall submit to the Agency a report summarizing the results of any remedial actions taken and actions planned.

c) To make the leak or remediation determinations in subsections (b)(3), (4) and (5) above, the owner or operator shall:

1) Either:

A) Assess the source of liquids and amounts of liquids by source;

B) Conduct a fingerprint, hazardous constituent or other analyses of the liquids in the LDS to identify the source of liquids and

possible location of any leaks, and the hazard and mobility of the liquid; and

C) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

2) Document why such assessments are not needed.

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to Section 40 of the Environmental Protection Act.

(Source: Added at 16 Ill. Reg. , effective)

Section 725.404 Monitoring and Inspection

a) An owner or operator required to have an LDS under Section 725.401(a) shall record the amount of liquids removed from each LDS sump at least once each week during the active life and closure period.

b) After the final cover is installed, the amount of liquids removed from each LDS sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator shall return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

c) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Agency based on pump activation level, sump dimensions and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed "pump operating level" will be in accordance with Section 725.402(a).

d) Final Agency determinations pursuant to this Section are deemed to be permit denials for purposes of appeal to the Board pursuant to

Section 40 of the Environmental Protection Act.

(Source: Added at 16 Ill. Reg. , effective
)

Section 725.410 Closure and Post-closure

a) At final closure of the landfill or upon closure of any cell, the owner or operator ~~must~~ shall cover the landfill or cell with a final cover designed and constructed to:

1) Provide long-term minimization of migration of liquids through the closed landfill;

2) Function with minimum maintenance;

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

4) Accommodate settling and subsidence so that the cover's integrity is maintained; and

5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

b) After final closure, the owner or operator shall comply with all post-closure requirements contained in Section 725.217 through 725.220 including maintenance and monitoring throughout the post-closure care period. The owner or operator shall:

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

2) Maintain and monitor the LDS in accordance with 35 Ill. Adm. Code 724.401(c)(3)(D) and (c)(4) and Section 725.404(b), and comply with all other applicable LDS requirements of this Part;

~~2~~ 3) Maintain and monitor the ~~ground-water~~ groundwater monitoring system and comply with all other applicable requirements of Subpart F;

~~3~~ 4) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and

~~4~~ 5) Protect and maintain surveyed benchmarks used in

complying with Section 725.409.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART W: DRIP PADS

Section 725.543 Design and operating requirements

a) Drip pads must:

1) Not be constructed of earthen materials, wood or asphalt, unless the asphalt is structurally supported;

2) Be sloped to free-drain to the associated collection system treated wood drippage, rain, other waters, or solutions of drippage and water or other wastes;

3) Have a curb or berm around the perimeter;

4) Be impermeable, e.g., concrete pads must be sealed, coated or covered with an impermeable material such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials or other wastes while being routed to an associated collection system; and

BOARD NOTE: The requirement that existing drip pads be impermeable, e.g., that drip pads be sealed, coated or covered with an impermeable material, is administratively stayed. The stay will remain in effect until October 30, 1992. The requirement that new drip pads be impermeable, e.g., that new drip pads be sealed, coated or covered with an impermeable material, is administratively stayed. The stay will remain in effect until further administrative action is taken.

5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of installation and the stress of daily operations, e.g., variable and moving loads such as vehicle traffic, movement of wood, etc.

BOARD NOTE: In judging the structural integrity requirement of this subsection, the Agency should

generally consider applicable standards established by professional organizations generally recognized by the industry, including ACI 318 or ASTM C94, incorporated by reference in 35 Ill. Adm. Code 720.111.

b) A new drip pad or an existing drip pad, after the deadline established in Section 725.541(b), must have:

1) A synthetic liner installed below the drip pad that is designed, constructed and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:

A) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation (including stresses from vehicular traffic on the drip pad);

B) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

C) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:

A) Constructed of materials that are:

i) Chemically resistant to the waste

managed in the drip pad and the leakage that might be generated;

ii) Designed and operated to function without clogging through the scheduled closure of the drip pad; and

iii) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad; and

B) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

c) Drip pads must be maintained such that they remain free of cracks, gaps, corrosion or other deterioration that could cause hazardous waste to be released from the drip pad.

BOARD NOTE: See subsection (m) for remedial action required if deterioration or leakage is detected.

d) The drip pad and associated collection system must be designed and operated to convey, drain and collect liquid resulting from drippage or precipitation in order to prevent run-off.

e) Unless the drip pad is protected by a structure, as described in Section 725.540(b), the owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-on that might enter the system.

f) Unless the drip pad is protected by a structure or cover, as described in Section 725.540(b), the owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

g) The drip pad must be evaluated to determine that it meets the requirements of subsections (a) through (f). The owner or operator shall obtain a statement from an independent, qualified, registered professional engineer certifying that the drip pad design meets the requirements of this Section.

h) Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

i) The drip pad surface must be cleaned thoroughly at least once every seven days such that accumulated residues of hazardous waste or other materials are removed, using an appropriate and effective cleaning technique, including but not limited to, rinsing, washing with detergents or other appropriate solvents, or steam cleaning. The owner or operator shall document, in the facility's operating log, the date and time of each cleaning and the cleaning procedure.

j) Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes must be held on the drip pad until drippage has ceased. The owner or operator shall maintain records sufficient to document that all treated wood is held on the pad, in accordance with this Section, following treatment.

l) Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

m) Throughout the active life of the drip pad, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

    1) Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage in the leak detection system), the owner or operator shall:

        A) Enter a record of the discovery in the facility operating log;

        B) Immediately remove from service the portion of the drip pad affected by the condition;

        C) Determine what steps must be taken to repair the drip pad, clean up any leakage from below the drip pad, and establish a schedule for

accomplishing the clean up and repairs;

D) Within 24 hours after discovery of the condition, notify the Agency of the condition and, within 10 working days, provide written notice to the Agency with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

2) The Agency shall: review the information submitted; make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean up are complete; and notify the owner or operator of the determination and the underlying rationale in writing.

3) Upon completing all repairs and clean up, the owner or operator shall notify the Agency in writing and provide a certification, signed by an independent, qualified, registered professional engineer, that the repairs and clean up have been completed according to the written plan submitted in accordance with subsection (m)(1)(D).

n) The owner or operator shall maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices and a description of treated wood storage and handling practices.

(Source: Added at 16 Ill. Reg. , effective
)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 726
STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTE AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

SUBPART C: RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

Section
726.120 Applicability
726.121 Standards applicable to generators and transporters of materials used in a manner that constitutes disposal
726.122 Standards applicable to storers, who are not the ultimate users, of materials that are to be used in a manner that constitutes disposal
726.123 Standards applicable to users of materials that are used in a manner that constitutes disposal

SUBPART D: HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY

Section
726.130 Applicability (Repealed)
726.131 Prohibitions (Repealed)
726.132 Standards applicable to generators of hazardous waste fuel (Repealed)
726.133 Standards applicable to transporters of hazardous waste fuel (Repealed)
726.134 Standards applicable to marketers of hazardous waste fuel (Repealed)
726.135 Standards applicable to burners of hazardous waste fuel (Repealed)
726.136 Conditional exemption for spent materials and by-products exhibiting a characteristic of hazardous waste (Repealed)

SUBPART E: USED OIL BURNED FOR ENERGY RECOVERY

Section
726.140 Applicability
726.141 Prohibitions
726.142 Standards applicable to generators of used oil burned for energy recovery
726.143 Standards applicable to marketers of used oil burned for energy recovery
726.144 Standards applicable to burners of used oil burned for energy recovery

SUBPART F: RECYCLABLE MATERIALS UTILIZED FOR PRECIOUS METAL RECOVERY

Section
726.170 Applicability and requirements

SUBPART G: SPENT LEAD-ACID BATTERIES BEING RECLAIMED

Section
726.180 Applicability and requirements

SUBPART H: HAZARDOUS WASTE BURNED IN BOILERS AND INDUSTRIAL FURNACES

Section
726.200 Applicability
726.201 Management prior to Burning
726.202 Permit standards for Burners
726.203 Interim status standards for Burners
726.204 Standards to control Organic Emissions
726.205 Standards to control PM
726.206 Standards to control Metals Emissions
726.207 Standards to control HCl and Chlorine Gas Emissions
726.208 Small quantity On-site Burner Exemption
726.209 Low risk waste Exemption
726.210 Waiver of DRE trial burn for Boilers
726.211 Standards for direct Transfer
726.212 Regulation of Residues
726.219 Extensions of Time

726.Appendix A Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals
726.Appendix B Tier I Feed Rate Screening Limits for Total Chlorine
726.Appendix C Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride
726.Appendix D Reference Air Concentrations
726.Appendix E Risk Specific Doses
726.Appendix F Stack Plume Rise
726.Appendix G Health-Based Limits for Exclusion of Waste-Derived Residues
726.Appendix H Potential PICs for Determination of Exclusion of Waste-Derived Residues
726.Appendix I Methods Manual for Compliance with BIF Regulations
726.Appendix J Guideline on Air Quality Models
726.Appendix K Lead-Bearing Materials That May be Processed in Exempt Lead Smelters
726.Appendix L Nickel or Chromium-Bearing Materials that may be Processed in Exempt Nickel-Chromium Recovery Furnaces
726.Table A Exempt Quantities for Small Quantity Burner Exemption

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R85-22 at 10 Ill. Reg. 1162, effective January 2, 1986; amended in R86-1 at 10 Ill. Reg. 14156,

effective August 12, 1986; amended in R87-26 at 12 Ill. Reg. 2900, effective January 15, 1988; amended in R89-1 at 13 Ill. Reg. 18606, effective November 13, 1989; amended in R90-2 at 14 Ill. Reg. 14533, effective August 22, 1990; amended in R90-11 at 15 Ill. Reg. 9727, effective June 17, 1991; amended in R91-13 at 16 Ill. Reg. 9858, effective June 9, 1992; amended in R91-10 at 16 Ill. Reg. , effective

SUBPART H: HAZARDOUS WASTE BURNED IN BOILERS AND INDUSTRIAL FURNACES

Section 726.200 Applicability

a) The regulations of this Subpart apply to hazardous waste burned or processed in a boiler or industrial furnace (BIF) (as defined in 35 Ill. Adm. Code 720.110) irrespective of the purpose of burning or processing, except as provided by subsections (b), (c), (d) and (f), below. In this Subpart, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of Sections 726.204, 726.205, 726.206 and 726.207 apply to facilities operating under interim status or under a RCRA permit as specified in Sections 726.202 and 726.203.

~~BOARD NOTE: This provision does not apply to coke ovens processing coke by-products wastes exhibiting the toxicity characteristic identified in 35 Ill. Adm. Code 721.124 pending completion of a rulemaking proposed by USEPA on July 26, 1991 (56 Fed. Reg. 35787). When that rulemaking is complete, this note will be removed.~~

b) The following hazardous wastes and facilities are not subject to regulation under this Subpart:

1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in 35 Ill. Adm. Code 721.Subpart C. Such used oil is subject to regulation under Subpart E rather than this Subpart;

2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;

3) Hazardous wastes that are exempt from regulation under 35 Ill. Adm. Code 721.104 and 721.106(a)(3)(E) through (H), and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators

under 35 Ill. Adm. Code 721.105; and

4) Coke ovens, if the only hazardous waste burned is USEPA Hazardous Waste No. K087, decanter tank tar sludge from coking operations.

c) Owners and operators of smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters and foundry furnaces, but not including cement kilns, aggregate kilns or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this Subpart, except for Sections 726.201 and 726.212.

1) To be exempt from Sections 726.202 through 726.211, an owner or operator of a metal recovery furnace shall comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dust emitted by steel manufacturing, shall comply with the requirements of subsection (c)(3), below:

A) Provide a one-time written notice to the Agency indicating the following:

i) The owner or operator claims exemption under this subsection;

ii) The hazardous waste is burned solely for metal recovery consistent with the provisions of subsection (c)(2), below;

iii) The hazardous waste contains recoverable levels of metals; and

iv) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection;

B) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this subsection under procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, incorporated by reference in 35 Ill. Adm. Code 720.111 or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not

prescribe a method for a particular determination, the owner or operator shall use the best available method; and

C) Maintain at the facility for at least three years records to document compliance with the provisions of this subsection including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

2) A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:

A) The hazardous waste has a total concentration of organic compounds listed in 35 Ill. Adm. Code 721.Appendix H, exceeding 500 ppm by weight, as fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by subsection (c)(1)(C), above; or

B) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and is so considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by subsection (c)(1)(C), above.

3) To be exempt from Sections 726.202 through 726.211, an owner or operator of a lead or nickel-chromium recovery furnace, or a metal recovery furnace that burns a baghouse bags used to capture metallic dusts emitted by steel manufacturing must provide a one-time written notice to the Agency identifying each hazardous waste burned and

specifying whether the owner or operator claims an exemption for each waste under this subsection or subsection (c)(1), above. The owner or operator shall comply with the requirements of subsection (c)(1), above, for those wastes claimed to be exempt under that subsection and shall comply with the requirements below for those wastes claimed to be exempt under this subsection.

A) The hazardous wastes listed in Appendices K and L and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of subsection (c)(1), above, provided that:

i) A waste listed in Appendix K must contain recoverable levels of lead. A waste listed in Appendix L must contain recoverable levels of nickel or chromium and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal; and

ii) The waste does not exhibit the Toxicity Characteristic of 35 Ill. Adm. Code 721.124 for an organic constituent; and

iii) The waste is not a hazardous waste listed in 35 Ill. Adm. Code 721.Subpart D because it is listed for an organic constituent as identified in 35 Ill. Adm. Code 721.Appendix G; and

iv) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of subsection (c)(3), above, and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis must be conducted according to subsection (C)(1)(B), above, and records to document compliance with subsection (c)(3), above, must be kept for at least three years.

B) The Agency may decide on a case-by-case basis that the toxic organic constituents in a material listed in Appendix K or L that contains a total concentration of more than

500 ppm toxic organic compounds listed in 35 Ill. Adm. Code 721.Appendix H may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of this Subpart. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of this Subpart when burning that material. In making the hazard determination, the Agency shall consider the following factors:

i) The concentration and toxicity of organic constituents in the material; and

ii) The level of destruction of toxic organic constituents provided by the furnace; and

iii) Whether the acceptable ambient levels established in Appendices D or E will be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

d) The standards for direct transfer operations under Section 726.211 apply only to facilities subject to the permit standards of Section 726.202 or the interim status standards of Section 726.203.

e) The management standards for residues under Section 726.212 apply to any BIF burning hazardous waste.

f) Owners and operators of smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium or ruthenium, or any combination of these, are conditionally exempt from regulation under this Subpart except for Section 726.212. To be exempt from Sections 726.202 through 726.211 an owner or operator shall:

1) Provide a one-time written notice to the Agency indicating the following:

A) The owner or operator claims exemption under

this ~~e~~ Section;

B) The hazardous waste is burned for legitimate recovery of precious metal; and

C) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this ~~e~~ Section.

2) Sample and analyze the hazardous waste as necessary to document that the waste is burned for recovery of economically significant amounts of precious metal using procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, incorporated by reference in 35 Ill. Adm. Code 720.111 or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; and

3) Maintain at the facility for at least three years records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.

g) Abbreviations and definitions. The following definitions and abbreviations are used in this Subpart:

"APCS" means air pollution control system.

"BIF" means boiler or industrial furnace.

"Carcinogenic metals" means arsenic, beryllium, cadmium and chromium.

"CO" means carbon monoxide.

"Continuous monitor" is a monitor which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

"DRE" means destruction or removal efficiency.

"cu m" means cubic meters.

"E" means "ten to the". For example, "XE-Y" means "X times ten to the -Y power".

"Feed rates" are measured as specified in Section 726.202(e)(6).

"Good engineering practice stack height" is as defined by 40 CFR 51.100(ii), incorporated by reference in 35 Ill. Adm. Code 720.111.

"HC" means hydrocarbon.

"~~Hel~~ HCl" means hydrogen chloride gas.

"Hourly rolling average" means the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

"K" means Kelvin.

"kVA" means kilovolt amperes.

"MEI" means maximum exposed individual.

"MEI location" means the point with the maximum annual average off-site (unless on-site is required) ground level concentration.

"Noncarcinogenic metals" means antimony, barium, lead, mercury, thallium and silver.

"One hour block average" means the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour

"PIC" means product of incomplete combustion.

"PM" means particulate matter.

"POHC" means principal organic hazardous constituent.

"ppmv" means parts per million by volume.

"QA/QC" means quality assurance and quality control.

"Rolling average for the selected averaging period" means the arithmetic mean of one hour block averages for the averaging period.

"RAC" means reference air concentration, the acceptable ambient level for the noncarcinogenic metals for purposes of this Subpart. RACs are

specified in Appendix D.

"RSD" means risk-specific dose, the acceptable ambient level for the carcinogenic metals for purposes of this Subpart. RSDs are specified in Appendix E.

"SSU" means "Saybolt Seconds Universal", a unit of viscosity measured by ASTM D88 or D2161, incorporated by reference in 35 Ill. Adm. Code 720.111.

"TCLP test" means the toxicity characteristic leaching procedure of 35 Ill. Adm. Code 721.124.

"TESH" means terrain-adjusted effective stack height (in meters).

"Tier I". See Section 726.206(b).

"Tier II". See Section 726.206(c).

"Tier III". See Section 726.206(d).

"Toxicity equivalence" is estimated, pursuant to Section 726.204(e), using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in Appendix I ("eye").

"ug" means microgram.

(Source: Amended at 16 Ill. Reg. , effective)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: HAZARDOUS WASTE OPERATING REQUIREMENTS

PART 728
LAND DISPOSAL RESTRICTIONS

SUBPART A: GENERAL

SUBPART B: SCHEDULE FOR LAND DISPOSAL PROHIBITION AND ESTABLISHMENT OF TREATMENT STANDARDS

SUBPART C: PROHIBITION ON LAND DISPOSAL

SUBPART D: TREATMENT STANDARDS

SUBPART E: PROHIBITIONS ON STORAGE

Section
728.150 Prohibitions on Storage of Restricted Wastes

728.Appendix A Toxicity Characteristic Leaching Procedure (TCLP)
728.Appendix B Treatment Standards (As concentrations in the Treatment Residual Extract)
728.Appendix C List of Halogenated Organic Compounds
728.Appendix D Organometallic Lab Packs
728.Appendix E Organic Lab Packs
728.Appendix F Technologies to Achieve Deactivation of Characteristics
728.Appendix G Federal Effective Dates
728.Appendix H National Capacity LDR Variances for UIC Wastes
728.Appendix I EP Toxicity Test Method and Structural Integrity Test

728.Table A Constituent Concentrations in Waste Extract (CCWE)
728.Table B Constituent Concentrations in Wastes (CCW)
728.Table C Technology Codes and Description of Technology-Based Standards
728.Table D Technology-Based Standards by RCRA Waste Code
728.Table E Standards for Radioactive Mixed Waste
728.Table H Wastes Excluded from CCW Treatment Standards

AUTHORITY: Implementing Section 22.4 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1991, ch. 111½, pars. 1022.4 and 1027).

SOURCE: Adopted in R87-5 at 11 Ill. Reg. 19354, effective November 12, 1987; amended in R87-39 at 12 Ill. Reg. 13046, effective July 29, 1988; amended in R89-1 at 13 Ill. Reg. 18403, effective November 13, 1989; amended in R89-9 at 14 Ill. Reg. 6232, effective April 16, 1990; amended in R90-2 at 14 Ill. Reg. 14470, effective August 22, 1990; amended in R90-10 at 14 Ill. Reg. 16508, effective September 25, 1990; amended in R90-11 at 15 Ill. Reg. 9462, effective June 17, 1991; amended in R90-11 at 15 Ill. Reg. 11937, effective August 12, 1991; amendment withdrawn at 15 Ill. Reg. 14716, October 11, 1991; amended in R91-13 at 16 Ill. Reg. 9619, effective June 9, 1992; amended in R92-10 at 16 Ill. Reg. , effective

SUBPART A: GENERAL

Section 728.103 Dilution Prohibited as a Substitute for Treatment

a) Except as provided in subsection (b), no generator, transporter, handler or owner or operator of a treatment, storage or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for

adequate treatment to achieve compliance with Subpart D, to circumvent the effective date of a prohibition in Subpart C, to otherwise avoid a prohibition in Subpart C.

b) Dilution of wastes that are hazardous only because they exhibit a characteristic in a treatment system which treats wastes subsequently discharged to a water of the State pursuant to an NPDES permit issued under 35 Ill. Adm. Code 309 or which treats wastes for purposes of pretreatment requirements under 35 Ill. Adm. Code 310 is not impermissible dilution for purposes of this Section unless a method has been specified as the treatment standard in Section 728.142, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART C: PROHIBITION ON LAND DISPOSAL

Section 728.135 Waste Specific Prohibitions--Third Third wastes.

a) The following wastes are prohibited from land disposal.

1) The wastes specified in 35 Ill. Adm. Code 721.131 as EPA Hazardous Waste Numbers:

F002 (1,1,2-trichloroethane)
F005 (benzene)
F005 (2-ethoxyethanol)
F005 (2-nitropropane)
F006 (wastewaters),
F019
F025
F039 (wastewaters);

2) The wastes specified in 35 Ill. Adm. Code 721.132 as EPA Hazardous Waste Numbers:

K002
K003
K004 (wastewaters)
K005 (wastewaters)
K006
K008 (wastewaters)
K011 (wastewaters)
K013 (wastewaters)
K014 (wastewaters)
K015 (nonwastewaters)

K017
K021 (wastewaters)
K022 (wastewaters)
K025 (wastewaters)
K026
K029 (wastewaters)
K031 (wastewaters)
K032
K033
K034
K035
K041
K042
K046 (wastewaters, reactive nonwastewaters)
K048 (wastewaters)
K049 (wastewaters)
K050 (wastewaters)
K051 (wastewaters)
K052 (wastewaters)
K060 (wastewaters)
K061 (wastewaters) and (high zinc subcategory > 15% zinc)
K069 (wastewaters, calcium sulfate nonwastewaters)
K073
K083
K084 (wastewaters)
K085
K095 (wastewaters)
K096 (wastewaters)
K097
K098
K100 (wastewaters)
K101 (wastewaters)
K102 (wastewaters)
K105
K106 (wastewaters)

3) The wastes specified in 35 Ill. Adm. Code 721.133(e) as EPA Hazardous Waste Numbers:

P001
P002
P003
P004
P005
P006
P007
P008
P009
P010 (wastewaters)
P011 (wastewaters)

P012 (wastewaters)
P014
P015
P016
P017
P018
P020
P022
P023
P024
P026
P027
P028
P031
P033
P034
P036 (wastewaters)
P037
P038 (wastewaters)
P042
P045
P046
P047
P048
P049
P050
P051
P054
P056
P057
P058
P059
P060
P064
P065 (wastewaters)
P066
P067
P068
P069
P070
P072
P073
P075
P076
P077
P078
P081
P082
P084
P088
P092 (wastewaters)
P093

P095
P096
P101
P102
P103
P105
P108

P110
P112
P113
P114
P115
P116
P118
P119
P120
P122
P123

4) The wastes specified in 35 Ill. Adm. Code 721.133(f) as EPA Hazardous Waste Numbers:

U001
U002
U003
U004
U005
U006
U007
U008
U009
U010
U011
U012
U014
U015
U016
U017
U018
U019
U020
U021
U022
U023
U024
U025
U026
U027
U029
U030
U031

U032
U033
U034
U035
U036
U037
U038
U039
U041
U042
U043
U044
U045
U046
U047
U048
U049
U050
U051
U052
U053
U055
U056
U057
U059
U060
U061
U062
U063
U064
U066
U067
U068
U070
U071
U072
U073
U074
U075
U076
U077
U078
U079
U080
U081
U082
U083
U084
U085
U086
U089
U090

U091
U092
U093
U094
U095
U096
U097
U098
U099
U101
U103
U105
U106
U108
U109
U110
U111
U112
U113
U114
U115
U116
U117
U118
U119
U120
U121
U122
U123
U124
U125
U126
U127
U128
U129
U130
U131
U132
U133
U134
U135
U136 (wastewaters)
U137
U138
U140
U141
U142
U143
U144
U145
U146
U147

U148
U149
U150
U151 (wastewaters)
U152
U153
U154
U155
U156
U157
U158
U159
U160
U161
U162
U163
U164
U165
U166
U167
U168
U169
U170
U171
U172
U173
U174
U176
U177
U178
U179
U180
U181
U182
U183
U184
U185
U186
U187
U188
U189
U191
U192
U193
U194
U196
U197
U200
U201
U202
U203
U204

U205
U206
U207
U208
U209
U210
U211
U213
U214
U215
U216
U217
U218
U219
U220
U222
U225
U226
U227
U228
U234
U236
U237
U238
U239
U240
U243
U244
U246
U247
U248
U249

4) The following wastes identified as hazardous based on a characteristic alone:

D001
D002
D003
D004 (wastewaters)
D005
D006
D007
D008 (except for lead materials stored before secondary smelting)
D009 (wastewaters)
D010
D011
D012
D013
D014
D015

D016
D017

b) The following wastes are prohibited from land disposal. The wastes specified in 35 Ill. Adm. Code 721.132 as EPA Hazardous Waste Numbers:

K048 (nonwastewaters)
K049 (nonwastewaters)
K050 (nonwastewaters)
K051 (nonwastewaters)
K052 (nonwastewaters)

c) Effective May 8, 1992, the following wastes are prohibited from land disposal:

1) The wastes specified in 35 Ill. Adm. Code 721.131 as EPA Hazardous Waste Numbers:

F039 (nonwastewaters)

2) The wastes specified in 35 Ill. Adm. Code 721.132 as EPA Hazardous Waste Numbers:

K031 (nonwastewaters)
K084 (nonwastewaters)
K101 (nonwastewaters)
K102 (nonwastewaters)
K106 (nonwastewaters)

3) The wastes specified in 35 Ill. Adm. Code 721.133(e) as EPA Hazardous Waste Numbers:

P010 (nonwastewaters)
P011 (nonwastewaters)
P012 (nonwastewaters)
P036 (nonwastewaters)
P038 (nonwastewaters)
P065 (nonwastewaters)
P087
P092 (nonwastewaters)

4) The wastes specified in 35 Ill. Adm. Code 721.133(f) as EPA Hazardous Waste Numbers:

U136 (nonwastewaters)
U151 (nonwastewaters)

5) The following wastes identified as hazardous based on a characteristic alone:

D004 (nonwastewaters)

~~D008 (lead materials stored before secondary smelting)~~
D009 (nonwastewaters);

6) Inorganic solids debris as defined in 35 Ill. Adm. Code 728.102 (which also applies to chromium refractory bricks carrying the EPA Hazardous Waste Numbers K048-K052); and

7) RCRA hazardous wastes that contain naturally occurring radioactive materials.

d) Effective May 8, 1992, hazardous wastes listed in Sections 728.110, 728.111 or 728.112 that are mixed radioactive/hazardous wastes, and soil or debris contaminated with hazardous wastes listed in Sections 728.110, 728.111 or 728.112 that are mixed radioactive/hazardous wastes, are prohibited from land disposal.

e) ~~Effective May 8, 1992, the wastes specified in this Section having a treatment standard in Subpart D based on incineration, mercury retorting, vitrification, acid leaching followed by chemical precipitation or thermal recovery of metals and which are contaminated soil or debris, are prohibited from land disposal.~~ Effective May 8, 1993, debris that is contaminated with wastes listed in Sections 728.110, 728.111 or 728.112, and debris that is contaminated with any characteristic waste for which treatment standards are established in Subpart D, are prohibited from land disposal.

h) Between May 8, 1990, and May 8, 1992, wastes included in subsections (c), (d) and (e), above, shall be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 728.105(h)(2).

i) The requirements of subsections (a), (b), (c), (d) and (e), above, do not apply if:

1) The wastes meet the applicable standards specified in Subpart D;

2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 728.106, with respect to those wastes and units covered by the petition;

3) The wastes meet the applicable alternate standards established pursuant to a petition granted under Section 728.144;

4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 728.105, with respect to these wastes covered by the extension.

j) To determine whether a hazardous waste listed in Section 728.110, 728.111 or 728.112 exceeds the applicable treatment standards specified in Sections 728.141 and 728.143, the initial generator shall either test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of this Part are applicable, except as otherwise specified.

k) Effective May 8, 1993, D008 lead materials stored before secondary smelting are prohibited from land disposal. On or before March 1, 1993, the owner or operator of each secondary lead smelting facility shall submit to the Agency the following: A binding contractual commitment to construct or otherwise provide capacity for storing such D008 wastes prior to smelting which complies with all applicable storage standards; documentation that the capacity to be provided will be sufficient to manage the entire quantity of such D008 wastes; and, a detailed schedule for providing such capacity. Failure by a facility to submit such documentation will render such D008 managed by that facility prohibited from land disposal effective March 1, 1993. In addition, no later than July 27, 1992, the owner or operator of each facility shall place in the facility record documentation of the manner and location in which such wastes will be managed pending completion of such capacity, demonstrating that such management capacity will be adequate and complies with all applicable requirements of 35 Ill. Adm. Code 720 through 728.

(Source: Amended at 16 Ill. Reg. , effective)

SUBPART D: TREATMENT STANDARDS

Section 728.141 Treatment Standards expressed as Concentrations in Waste Extract

a) Table A identifies the restricted wastes and the concentrations of their associated ~~hazardous~~ constituents which may not be exceeded by the extract

of a waste or waste treatment residual developed using the test method in Appendix A for the allowable land disposal of such wastes, with the exception of wastes D004, D008, ~~K031~~ D031, K084, K101, K102, P010, P011, P012, P036~~, P038~~ and U136~~. Table A identifies the restricted wastes D004, D008, K031, K084, K101, K102, P010, P011, P012, P036, P038 and U136~~ and the concentrations of their associated constituents which shall not be exceeded by the extract of a waste or waste treatment residual developed using the test method in 35 Ill. Adm. Code 721.Appendix ~~A or~~ B for the allowable land disposal of such wastes. (Appendix B of this Part provides guidance on treatment methods that have been shown to achieve the Table A levels for the respective wastes. Appendix B of this Part is not a regulatory requirement but is provided to assist generators and owners or operators in their selection of appropriate treatment methods.) Compliance with these concentrations is required based upon grab samples, unless otherwise noted in Table A.

b) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern, except that mixtures of high and low zinc nonwastewater K061 are subject to the treatment standard for high zinc K061.

(Source: Amended at 16 Ill. Reg. , effective)

Section 728.Table D Technology-Based Standards by RCRA Waste Code

Waste Codes	See Also	CAS No.	Technology Code, Wastewaters	Technology Code, Nonwastewaters	Waste Descriptions and/or Treatment Subcategory
D001	NA	NA	DEACT	NA	Ignitable Liquids based on 35 Ill. Adm. Code 721.121(a)(1)-wastewaters

D001	NA	NA	NA	DEACT	Ignitable Liquids based on 35 Ill. Adm. Code 721.121(a)(1)-Low TOC Ignitable Liquids Subcategory--Less than 10% total organic carbon
D001	NA	NA	NA	FSUBS; RORGS; or INCIN	Ignitable Liquids based on 35 Ill. Adm. Code 721.121(a)(1)-High TOC Ignitable Liquids Subcategory--Greater than or equal to 10% total organic carbon
D001	NA	NA	NA	DEACT B	Ignitable compressed gases based on 35 Ill. Adm. Code 721.121(a)(3)
D001	NA	NA	NA	DEACT	Ignitable reactives based on 35 Ill. Adm. Code 721.121(a)(2)
D001	NA	NA	DEACT	DEACT	Oxidizers based on 35 Ill. Adm. Code 721.121(a)(4)
D002	NA	NA	DEACT	DEACT	Acid subcategory based on 35 Ill. Adm. Code 721.122(a)(1)
D002	NA	NA	DEACT	DEACT	Alkaline subcategory based on 35 Ill. Adm. Code 721.122(a)(1)
D002	NA	NA	DEACT	DEACT	Other corrosives based on 35 Ill. Adm. Code 721.122(a)(2)

D003	~~NA~~	NA	DEACT ~~(may not be diluted)~~ but not including dilution as a substitute for adequate treatment.	DEACT ~~(may not be diluted)~~ but not including dilution as a substitute for adequate treatment.	Reactive sulfides based on 35 Ill. Adm. Code 721.123(a)(5)
D003	NA	NA	DEACT	DEACT	Explosives based on 35 Ill. Adm. Code 721.123(a)(6), (7) and (8)
D003	NA	NA	NA	DEACT	Water reactives based on 35 Ill. Adm. Code 721.123(a)(2), (3) and (4)
D003	NA	NA	DEACT	DEACT	Other reactives based on 35 Ill. Adm. Code 721.123(a)(1)
D006	NA	7440-43-9	NA	RTHERM	Cadmium-containing batteries
D008	NA	7439-92-1	NA	RLEAD	Lead acid batteries (Note: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of this Part or exempted under other regulations (see 35 Ill. Adm. Code 726.180).)

D009	Tables A & B	7439-97-6	NA	IMERC; or RMERC	Mercury: (High Mercury Subcategory--greater than or equal to 260 mg/kg total Mercury--contains mercury and organics (and are not incinerator residues))
D009	Tables A & B	7439-97-6	NA	RMERC	Mercury: (High Mercury Subcategory--greater than or equal to 260 mg/kg total Mercury--inorganics (including incinerator residues and residues from RMERC))
D012	Table B	72-20-8	BIODG; or INCIN	NA	Endrin
D013	Table B	58-89-9	CARBN; or INCIN	NA	Lindane
D014	Table B	72-43-5	WETOX; or INCIN	NA	Methoxychlor
D015	Table B	8001-35-1	BIODG; or INCIN	NA	Toxaphene
D016	Table B	94-75-7	CHOXD; BIODG; or INCIN	NA	2,4-D
D017	Table B	93-72-1	CHOXD; or INCIN	NA	2,4,5-TP
F005	Tables A & B	79-46-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2-Nitropropane
F005	Tables A & B	110-80-5	BIODG; or INCIN	INCIN	2-Ethoxyethanol
F024	Tables A & B	NA	INCIN	INCIN	----------

K025	NA	NA	LLEXT fb SSTRIP fb CARBN; or INCIN	INCIN	Distillation bottoms from the production of nitrobenzene by the nitration of benzene
K026	NA	NA	INCIN	INCIN	Stripping still tails from the production of methyl ethyl pyridines
K027	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Centrifuge and distillation residues from toluene diisocyanate production
K039	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate
K044	NA	NA	DEACT	DEACT	Wastewater treatment sludges from the manufacturing and processing of explosives
K045	NA	NA	DEACT	DEACT	Spent carbon from the treatment of wastewater containing explosives
K047	NA	NA	DEACT	DEACT	Pink/red water from TNT operations
K069	Tables A & B	NA	NA	RLEAD	Emission control dust/sludge from secondary lead smelting: Non-Calcium Sulfate Subcategory

K106	Tables A & B	NA	NA	RMERC	Wastewater treatment sludge from the mercury cell process in chlorine production: (High Mercury Subcategory-greater than or equal to 260 mg/kg total mercury)
K113	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene
K114	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene
K115	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene
K116	NA	NA	CARBN; or INCIN	FSUBS; or INCIN	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine
P001	NA	81-81-2	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Warfarin (>0.3%)
P002	NA	591-08-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1-Acetyl-2-thiourea

P003	NA	107-02-8	NA	FSUBS; or INCIN	Acrolein
P005	NA	107-18-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Allyl alcohol
P006	NA	20859-73-8	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Aluminum phosphide
P007	NA	2763-96-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	5-Aminoethyl 3-isoxazolol
P008	NA	504-24-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	4-Aminopyridine
P009	NA	131-74-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Ammonium picrate
P014	NA	108-95-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thiophenol (Benzene thiol)
P015	NA	7440-41-7	RMETL or RTHRM	RMETL; or RTHRM	Beryllium dust
P016	NA	542-88-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Bis(chloromethyl)-ether
P017	NA	598-31-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Bromoacetone
P018	NA	357-57-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Brucine
P022	Table B	75-15-0	NA	INCIN	Carbon disulfide

P023	NA	107-20-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Chloroacetaldehyde
P026	NA	5344-82-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1-(o-Chlorophenyl)-thiourea
P027	NA	542-76-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	3-Chloropropio-nitrile
P028	NA	100-44-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Benzyl chloride
P031	NA	460-19-5	CHOXD; WETOX; or INCIN	CHOXD; WETOX; or INCIN	Cyanogen
P033	NA	506-77-4	CHOXD; WETOX; or INCIN	CHOXD; WETOX; or INCIN	Cyanogen chloride
P034	NA	131-89-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2-Cyclohexyl-4,6-di-nitrophenol
P040	NA	297-97-2	CARBN; or INCIN	FSUBS; or INCIN	O,O-Diethyl O-pyrazinyl phosphoro-thioate
P041	NA	311-45-5	CARBN; or INCIN	FSUBS; or INCIN	Diethyl-p-nitro-phenyl phosphate
P042	NA	51-43-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Epinephrine
P043	NA	55-91-4	CARBN; or INCIN	FSUBS; or INCIN	Diisopropylfluoro-phosphate (DFP)
P044	NA	60-51-5	CARBN; or INCIN	FSUBS; or INCIN	Dimethoate

P045	NA	39196-18-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thiofanox
P046	NA	122-09-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	alpha,alpha-Dimethylphenethylamine
P047	NA	534-52-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	4,6-Dinitro-o-cresol salts
P049	NA	541-53-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2,4-Dithiobiuret
P054	NA	151-56-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Aziridine
P056	Table B	7782-41-4	NA	ADGAS fb NEUTR	Fluorine
P057	NA	640-19-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Fluoroacetamide
P058	NA	62-74-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Fluoroacetic acid, sodium salt
P062	NA	757-58-4	CARBN; or INCIN	FSUBS or INCIN	Hexaethyltetraphosphate
P064	NA	624-83-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Isocyanic acid, ethyl ester

P065	Tables A & B	628-86-4	NA	RMERC	Mercury fulminate: (High Mercury Sub-category--greater than or equal to 260 mg/kg total Mercury--either incinerator residues or residues from RMERC)
P065	Tables A & B	628-86-4	NA	IMERC	Mercury fulminate: (All nonwastewaters that are not incinerator residues or are not residues from RMERC; regardless of Mercury Content)
P066	NA	16752-77-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Methomyl
P067	NA	75-55-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2-Methylaziridine
P068	NA	60-34-4	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; OR INCIN	Methyl hydrazine
P069	NA	75-86-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Methyllactonitrile
P070	NA	116-06-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Aldicarb
P072	NA	86-88-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1-Naphthyl-2-thio-urea

P075	NA	54-11-5 A	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Nicotine and salts
P076	NA	10102-43-9	ADGAS	ADGAS	Nitric oxide
P078	NA	10102-44-0	ADGAS	ADGAS	Nitrogen dioxide
P081	NA	55-63-0	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Nitroglycerin
P082	Table B	62-75-9	NA	INCIN	N-Nitrosodimethyl-amine
P084	NA	4549-40-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Nitrosomethyl-vinylamine
P085	NA	152-16-9	CARBN; or INCIN	FSUBS; or INCIN	Octamethylpyro-phosphoramide
P087	NA	20816-12-0	RMETL; or RTHRM	RMETL; or RTHRM	Osmium tetroxide
P088	NA	145-73-3	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Endothall
P092	Tables A & B	62-38-4	NA	RMERC	Phenyl mercury acetate: (High Mercury Sub-category--greater than or equal to 260 mg/kg total Mercury--either in-cinerator residues or residues from RMERC)

P092	Tables A & B	62-38-4	NA	IMERC; or RMERC	Phenyl mercury acetate: (All nonwastewaters that are not incinerator residues and are not residues from RMERC: regardless of Mercury Content)
P093	NA	103-85-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Phenylthiourea
P095	NA	75-44-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Phosgene
P096	NA	7803-51-2	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Phosphine
P102	NA	107-19-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Propargyl alcohol
P105	NA	26628-22-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Sodium azide
P108	NA	57-24-9 A	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Strychnine and salts
P109	NA	3689-24-5	CARBN; or INCIN	FSUBS; or INCIN	Tetraethyldithio-pyrophosphate
P112	NA	509-14-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Tetranitromethane
P113	Table B	1314-32-5	NA	RTHRM; or STABL	Thallic oxide

P115	Table B	7446-18-6	NA	RTHRM; or STABL	Thallium (I) sulfate
P116	NA	79-19-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thiosemicarbazide
P118	NA	75-70-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Trichloromethane-thiol
P119	Table B	7803-55-6	NA	STABL	Ammonium vanadate
P120	Table B	1314-62-1	NA	STABL	Vanadium pentoxide
P122	NA	1314-84-7	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Zinc Phosphide (>10%)
U001	NA	75-07-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Acetaldehyde
U003	Table B	75-05-8	NA	INCIN	Acetonitrile
U006	NA	75-36-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Acetyl chloride
U007	NA	79-06-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Acrylamide
U008	NA	79-10-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Acrylic acid
U010	NA	50-07-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Mitomycin C
U011	NA	61-82-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Amitrole

U014	NA	492-80-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Auramine
U015	NA	115-02-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Azaserine
U016	NA	225-51-4	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Benz(c)acridine
U017	NA	98-87-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Benzal chloride
U020	NA	98-09-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Benzenesulfonyl chloride
U021	NA	92-87-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Benzidine
U023	NA	98-07-7	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Benzotrichloride
U026	NA	494-03-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Chlornaphazin
U033	NA	353-50-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Carbonyl fluoride
U034	NA	75-87-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Trichloro-acetaldehyde (Chloral)

U035	NA	305-03-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Chlorambucil
U038	Table B	510-15-6	NA	INCIN	Chlorobenzilate
U041	NA	106-89-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1-Chloro-2,3-epoxy-propane (Epichloro-hydrin)
U042	Table B	110-75-8	NA	INCIN	2-Chloroethyl vinyl ether
U046	NA	107-30-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Chloromethyl methyl ether
U049	NA	3165-93-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	4-Chloro-o-toluidine hydrochloride
U053	NA	4170-30-3	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Crotonaldehyde
U055	NA	98-82-8	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Cumene
U056	NA	110-82-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Cyclohexane
U057	Table B	108-94-1	NA	FSUBS; or INCIN	Cyclohexanone
U058	NA	50-18-0	CARBN; or INCIN	FSUBS; or INCIN	Cyclophosphamide
U059	NA	20830-81-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Daunomycin

U062	NA	2303-16-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Diallate
U064	NA	189-55-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	1,2,7,8-Dibenzo-pyrene
U073	NA	91-94-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	3,3'-Dichlorobenz-idine
U074	NA	1476-11-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	cis-1,4-Dichloro-2-butene; trans-1,4-Dichloro-2-butene
U085	NA	1464-53-5	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	1,2:3,4-Diepoxy-butane
U086	NA	1615-80-1	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	N,N-Diethylhydrazine
U087	NA	3288-58-2	CARBN; or INCIN	FSUBS; or INCIN	O,O-Diethyl S-methyldithio-phosphate
U089	NA	56-53-1	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Diethyl stilbestrol
U090	NA	94-58-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Dihydrosafrole
U091	NA	119-90-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	3,3'-Dimethoxy-benzidine

U092	NA	124-40-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Dimethylamine
U093	Table B	621-90-9	NA	INCIN	p-Dimethylaminoazo-benzene
U094	NA	57-97-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	7,12-Dimethylbenz-(a)anthracene
U095	NA	119-93-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	3,3'-Dimethylbenz-idine
U096	NA	80-15-9	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	alpha,alpha-Dimethyl-benzyl hydroperoxide
U097	NA	79-44-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Dimethylcarbamoyl chloride
U098	NA	57-14-7	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	1,1-Dimethyl-hydrazine
U099	NA	540-73-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	1,2-Dimethyl-hydrazine
U103	NA	77-78-1	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Dimethyl sulfate
U109	NA	122-66-7	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	1,2-Diphenyl-hydrazine

U110	NA	142-84-7	(WETOX or CHOXD) fb CARBN; or INCIN	Dipropylamine
U113	NA	140-88-5	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or Ethyl acrylate
U114	NA	111-54-6	(WETOX or CHOXD) fb CARBN; or INCIN	Ethylenebisdithiocarbamic acid
U115	NA	75-21-8	(WETOX or CHOXD) fb CARBN; or INCIN	CHOXD; or Ethylene oxide
U116	NA	96-45-7	(WETOX or CHOXD) fb CARBN; or INCIN	Ethylene thiourea
U119	NA	62-50-0	(WETOX or CHOXD) fb CARBN; or INCIN	Ethyl methanesulfonate
U122	NA	50-00-0	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or Formaldehyde
U123	NA	64-18-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or Formic acid
U124	NA	110-00-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or Furan
U125	NA	98-01-1	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or Furfural

U126	NA	765-34-4	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Glycidylaldehyde
U132	NA	70-30-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Hexachlorophene
U133	NA	302-01-2	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Hydrazine
U134	Table B	7664-39-3	NA	ADGAS fb NEUTR; or NEUTR	Hydrogen Fluoride
U135	NA	7783-06-4	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Hydrogen Sulfide
U143	NA	303-34-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Lasiocarpine
U147	NA	108-31-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Maleic anhydride
U148	NA	123-33-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Maleic hydrazide
U149	NA	109-77-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Malononitrile
U150	NA	148-82-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Melphalan

U151	Tables A & B	7439-97-6	NA	RMERC	Mercury: (High Mercury Sub-category--greater than or equal to 260 mg/kg total Mercury)
U153	NA	74-93-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Methanethiol
U154	NA	67-56-1	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Methanol
U156	NA	79-22-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Methyl chloro-carbonate
U160	NA	1338-23-4	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN	Methyl ethyl ketone peroxide
U163	NA	70-25-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Methyl-N'-nitro-N-Nitrosoguanidine
U164	NA	56-04-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Methylthiouracil
U166	NA	130-15-4	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	1,4-Naphthoquinone
U167	NA	134-32-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1-Naphthylamine
U168	Table B	91-59-8	NA	INCIN	2-Naphthylamine

U171	NA	79-46-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2-Nitropropane
U173	NA	1116-54-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Nitroso-diethanol-amine
U176	NA	759-73-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Nitroso-N-ethyl-urea
U177	NA	684-93-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Nitroso-N-methyl-urea
U178	NA	615-53-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	N-Nitroso-N-methyl-urethane
U182	NA	123-63-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Paraldehyde
U184	NA	76-01-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Pentachloroethane
U186	NA	504-60-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	1,3-Pentadiene
U189	NA	1314-80-3	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Phosphorus sulfide
U191	NA	109-06-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2-Picoline

U193	NA	1120-71-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	1,3-Propane sultone
U194	NA	107-10-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	n-Propylamine
U197	NA	106-51-4	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	p-Benzoquinone
U200	NA	50-55-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Reserpine
U201	NA	108-46-3	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Resorcinol
U202	NA	81-07-2 A	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Saccharin and salts
U206	NA	18883-66-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Streptozatocin
U213	NA	109-99-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Tetrahydrofuran
U214	Table B	563-68-8	NA	RTHRM; or STABL	Thallium (I) acetate
U215	Table B	6533-73-9	NA	RTHRM; or STABL	Thallium (I) carbonate
U216	Table B	7791-12-0	NA	RTHRM; or STABL	Thallium (I) chloride
U217	Table B	10102-45-1	NA	RTHRM; or STABL	Thallium (I) nitrate

U218	NA	62-55-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thioacetamide
U219	NA	62-56-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thiourea
U221	NA	25376-45-8	CARBN; or INCIN	FSUBS; or INCIN	Toluenediamine
U222	NA	636-21-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	o-Toluidine hydrochloride
U223	NA	26471-62-5	CARBN; or INCIN	FSUBS; or INCIN	Toluene diisocyanate
U234	NA	99-35-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	sym-Trinitrobenzene
U236	NA	72-57-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Trypan Blue
U237	NA	66-75-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Uracil mustard
U238	NA	51-79-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Ethyl carbamate
U240	NA	94-75-7 A	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	2,4-Dichlorophenoxyacetic acid (salts and esters)
U244	NA	137-26-8	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN	Thiram

U246	NA	506-68-3	CHOXD; WETOX; or INCIN	CHOXD; WETOX; or INCIN	Cyanogen bromide
U248	NA	81-81-2	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN	Warfarin (0.3% or less)
U249	NA	1314-84-7	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN	Zinc Phosphide (<10%)

A CAS Number given for parent compound only.

B This waste code exists in gaseous form and is not categorized as wastewater or nonwastewater forms.

NA Not Applicable.

BOARD NOTE: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in this Table by indicating the five letter technology code that must be applied first, then the designation "fb" (an abbreviation for "Followed by"), then the five letter technology code for the technology that must be applied next, and so on. When more than one technology (or treatment train) are specified a alternative treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word "or". This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard. See Section 728.Table C for a listing of the technology codes and technology-based treatment standards.

Derived from 40 CFR 268.42, Table 2 ~~(1990), as amended at 56 Fed. Reg. 3876, January 31, 1991~~ (1991), as amended at 57 Fed. Reg. 8088, March 6, 1992.

(Source: Amended at 16 Ill. Reg. , effective)