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## IC 13-14-9 Notices

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### TITLE 326 AIR POLLUTION CONTROL BOARD

#### FIRST NOTICE OF COMMENT PERIOD #02-188(APCB)

#### DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING CORRECTIONS TO PERMITTING RULES

##### PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rules at 326 IAC 2 concerning air permits. The amendments will include corrections, clarifications, and resolution of issues related to federal approval of minor new source review rules. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**CITATIONS AFFECTED:** 326 IAC 2.

**AUTHORITY:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11.

##### SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

In December of 1998, amendments to regulations in 326 IAC 2 concerning air permitting were promulgated that reorganized the rules and updated procedural requirements. The process for modifications, which had been in a separate section, was moved into the specific rules for the different operating programs. Some of the procedures were also revised at that time. Now that these regulations have been in effect for several years, it has become evident that there is a need for corrections and clarifications to reduce confusion in some parts of Article 2.

In addition, U. S. EPA has informally identified issues that may need revision for federal approval of the minor new source review rules. One issue is the federal enforceability of interim approvals in 326 IAC 2-13. Another is the level of compliance monitoring in source specific operating agreements regulated in 326 IAC 2-9. Other revisions necessary for federal approval may be identified in the course of this rulemaking and will also be addressed.

IDEM will recommend amendments that will include corrections and clarifications throughout Article 2, and resolution of issues related to federal approval of minor new source review rules.

This rulemaking potentially could impact anyone required to obtain an air permit in Indiana. Both industry and the public will benefit from the clarifications and corrections to be made by providing language that is easier to understand. Revisions to the rules that enable U.S. EPA to approve rules will provide consistency between state and federal requirements.

IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

##### STATUTORY AND REGULATORY REQUIREMENTS

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.

(6) Economic reasonableness of measuring or reducing any particular type of pollution.

(7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

##### REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#02-188(APCB) Permit Rules  
Kathryn A. Watson, Chief  
Air Programs Branch  
Office of Air Quality  
Indiana Department of Environmental Management  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the IDEM receptionist on duty at the tenth floor reception desk, Office of Air Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Section at (317) 233-0426.

##### COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Chris Pedersen, Rules Section, Office of Air Quality, (317) 233-6868 or (800) 451-6027 (in Indiana).

Janet McCabe  
Assistant Commissioner  
Office of Air Quality

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### TITLE 326 AIR POLLUTION CONTROL BOARD

#### FIRST NOTICE OF COMMENT PERIOD #02-189(APCB)

#### DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING LEAD-BASED PAINT ACTIVITIES

##### PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rules in 326 IAC 23 to implement the requirements of House Enrolled Act 1171. 326 IAC 23 concerns the licensing and approval of individuals and firms engaged in lead-based paint activities and training programs providing instruction in such activities. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**CITATIONS AFFECTED:** 326 IAC 23.

**AUTHORITY:** IC 13-14-9; IC 13-17-14-5.

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

IDEM established a lead-based paint program in 326 IAC 23 effective February 5, 1999, to ensure that a person conducting lead-based paint activities in certain specified housing and child-occupied facilities does so in a manner that protects the health of the building's occupants, especially children six (6) years of age and younger. This program requires a person to be licensed by IDEM to perform lead-based paint abatement activities. It establishes fees for the licensing of individuals, contractors, and the approval of training courses and training course providers. This program is similar to the accreditation program for asbestos workers.

In 2002, the Indiana General Assembly enacted HEA 1171, which amends the Indiana Code under IC 13-17-14 for the lead-based paint program. HEA 1171 requires the air pollution control board to amend 326 IAC 23 by July 1, 2003, to incorporate the new statutory changes. This rulemaking will meet that requirement. HEA 1171 may be reviewed at [www.state.in.us/legislative](http://www.state.in.us/legislative).

**STATUTORY AND REGULATORY REQUIREMENTS**

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

**REQUEST FOR PUBLIC COMMENTS**

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#02-189(APCB) Lead-based paint  
Kathryn A. Watson, Chief  
Air Programs Branch  
Office of Air Quality  
Indiana Department of Environmental Management  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the IDEM receptionist on duty at the tenth floor reception desk, Office of Air Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Section at (317) 233-0426.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Suzanne Whitmer, Rules Development Section, Office of Air Quality, (317) 232-8229 or (800) 451-6027 (in Indiana).

Janet McCabe  
Assistant Commissioner  
Office of Air Quality

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**TITLE 326 AIR POLLUTION CONTROL BOARD****SECOND NOTICE OF COMMENT PERIOD  
#01-407(APCB)****DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING U.S. STEEL-GARY WORKS PARTICULATE MATTER EMISSION LIMITS****PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments to the particulate matter emission limits at U.S. Steel-Gary Works and U.S. Steel-Gary Coke Operations. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**HISTORY**

First Notice of Comment Period: December 1, 2001, Indiana Register (25 IR 943).

**CITATIONS AFFECTED:** 326 IAC 6-1-10.1; 326 IAC 6-1-10.2.

**AUTHORITY:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11.

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

U.S. Steel has requested revisions to the particulate matter (PM<sub>10</sub>) limits in 326 IAC 6-1-10.1 that are specific to its integrated steel making operations located in Gary, Indiana. The amended rules will be submitted to U.S. EPA as an amendment to the SIP upon promulgation.

Revisions to U.S. Steel's PM<sub>10</sub> emissions limits are necessary to address changes at its integrated steel making operation that have occurred since the current rules became effective in 1993, including the closure of certain emissions units, installation of new emissions units, and installation of new control systems. Many of these changes are the result of an Agreed Order entered into by IDEM and U.S. Steel in March 1996 that required substantial reductions in PM<sub>10</sub> emissions from a number of individual facilities at the plant. U.S. Steel has provided an updated inventory, modeling, and other information to evaluate the impact of these changes on ambient concentrations of PM<sub>10</sub>. The updated inventory includes fugitive dust emissions from the plant area, roadways, storage piles and material handling activities, and an update of emissions sources due to the removal, replacement or installation of equipment. The PM<sub>10</sub> emission limits must be based on modeling information that clearly demonstrates compliance with the National Ambient Air Quality Standards. The overall PM<sub>10</sub> emissions

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from U.S. Steel's integrated steel making operation will be reduced by approximately three hundred fifty (350) tons per year.

At the present time, U.S. Steel-Gary Works is operating under a variance granted by the department under IC 13-14-8 from certain provisions of 326 IAC 6-1-10.1 in response to the above mentioned changes at U.S. Steel. This rulemaking will update PM<sub>10</sub> emission limits in the rule so that the variance from 326 IAC 6-1-10.1 is no longer needed.

In addition, on December 10, 2001, U.S. Steel-Gary Coke Operations requested a variance from certain monitoring and reporting requirements in 326 IAC 6-1-10.2. U.S. Steel-Gary Coke Operations ceased using process water in the coke quench water system and began using lake water in accordance with a March 22, 1996 Agreed Order with IDEM. The monitoring and reporting requirements had been promulgated specifically for the use of process water. Therefore, the change to lake water meant that the requirements were no longer necessary. IDEM granted the requested variance from monitoring and reporting requirements in 326 IAC 6-1-10.2(c)(7)(B) through 326 IAC 6-1-10.2(c)(7)(D) on April 1, 2002. This rulemaking is intended to remove these provisions from the rule since they are no longer necessary and to avoid the need to issue future variances to U.S. Steel-Gary Coke Operations for these requirements.

### SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from December 1, 2001 through January 2, 2002 on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received no comments in response to the first notice of public comment period.

### REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#01-407(APCB), U.S. Steel PM<sub>10</sub> Emission Limits  
 Kathryn A. Watson, Chief  
 Air Programs Branch  
 Office of Air Quality  
 Indiana Department of Environmental Management  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor reception desk, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana, Monday through Friday, between 8:15 a.m. and 4:45 p.m.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday between 8:15 a.m. and 4:45 p.m.

Please confirm the timely receipt of faxed comments by calling the Rules Development Section at (317) 233-0426.

### COMMENT PERIOD DEADLINE

Comments must be postmarked, hand delivered, or faxed by July 31, 2002.

Additional information regarding this action may be obtained from Chris Pedersen, Rules Development Section, Office of Air Quality, (317) 233-6868 or (800) 451-6027, press 0, and ask for ext. 3-6868 (in Indiana).

### DRAFT RULE

SECTION 1. 326 IAC 6-1-10.1, PROPOSED TO BE AMENDED AT 25 IR 1959, SECTION 1, IS AMENDED TO READ AS FOLLOWS:

#### 326 IAC 6-1-10.1 Lake County PM<sub>10</sub> emission requirements

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11  
 Affected: IC 13-15; IC 13-17

Sec. 10.1. (a) This section applies to the sources, facilities, and operations listed in subsection (d).

(b) The following definitions apply throughout this section:

- (1) "lbs/hr" means pounds of particulate matter emissions emitted per one (1) sixty (60) minute period.
- (2) "lbs/MMBtu" means pounds of particulate matter emissions per million British thermal units heat input of fuels fired in the source, unless otherwise stated.
- (3) "lbs/ton" means pounds of particulate matter emissions per ton of product output from the particular facility, unless otherwise stated. Byproducts that may be sold as product shall not be included under the term "product".
- (4) "gr/dscf" means grains of particulate matter per dry standard cubic foot of exhaust air.

(c) All emission limits in this section shall be PM<sub>10</sub> limits, unless otherwise stated.

(d) The following sources shall comply with the corresponding PM<sub>10</sub> and total suspended particulates (TSP) emission limitations and other requirements in this section consistent with the provisions as applicable in subsection (k). Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply:

- (1) to one (1) stack serving the multiple units specified when the facility description notes "stack serving"; and
- (2) to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

<u>Source</u>	<u>Emission Limit (Units)</u>	<u>Emission Limit (lbs/hr)</u>
<b>(1) JUPITER ALUMINUM CORPORATION</b>		
Reverberatory furnace number 1	0.060 lbs/ton	0.970
Reverberatory furnace number 2	0.142 lbs/ton	0.430
Reverberatory furnace number 3	0.145 lbs/ton	0.510
Reverberatory furnace number 4	0.145 lbs/ton	0.510
Reverberatory furnace number 5	0.130 lbs/ton	1.137
<b>(2) SILGAN CONTAINERS MANUFACTURING CORPORATION</b>		
Stack serving incinerators (3 units)	0.007 lbs/MMBtu	0.310
Coil coater	0.007 lbs/MMBtu	0.290

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(3) CERESTAR USA, INC.	Stack Number	lbs/hr	gr/dscf
Stack serving boiler numbers 6 and 7	10-03-U-P and 10-04-U-P	30.3	
Stack serving boiler numbers 8 and 10	10-05-U-P and 10-06-U-P	22.7	
Activated carbon regenerating furnace	15G-01-R-F	0.34	0.01
Bulk carbon/bulk filter aid system	17-03-R-P	0.06	0.01
Corn syrup solids dust collection system number 2	18-03-R-P	0.30	0.01
Special starch (P. G.) manufacturing equipment system number 1	18-06-S-P	0.17	0.01
Special starch (P. G.) manufacturing equipment system number 2	18-07-S-P	0.084	0.01
Special starch (P. G.) manufacturing equipment system number 3C (½ system number 3)	18-08-S-P	0.12	0.01
Special starch (P. G.) manufacturing equipment system number 3D (½ system number 3)	18-09-S-P	0.12	0.01
Gluten ring dryer #1	19-03-G-P	4.76	0.015
Receiver for first stage germ dryer	21A-01-G-P	0.12	0.015
First stage germ dryer exhaust	21A-02-G-P	0.67	0.01
Equipment conveying corn dirt to dirt storage silo	30-16-G-P	0.06	0.01
Waxy feed conveyor system	31-02-G	0.27	0.01
Finished gluten conveying system (Tank 2 or 3)	31-10-G-P or 31-11-G-P	0.19	0.02
Gluten receiver	31-13-G (3/95)	0.23	0.02
Germ storage silo	31-14-G (10/95)	0.097	0.01
Corn receiving and storage-bin vent #5	33-01-G (12/95)	0.171	0.02
Corn receiving and storage-bin vent #6	33-02-G (12/95)	0.171	0.02
Corn cleaner	33-03-G (12/95)	0.21	0.01
Dextrin incoming starch, building 34	34-01-S-P	0.04	0.01
Dextrin starch reactor #1	34-02-S-P	0.180	0.01
Dextrin starch cooler #1	34-03-S-P	0.042	0.01
Dextrin storage hopper, building 34	34-05-S-P	0.11	0.01
Dextrin feed hoppers: 1 and 2 (System 1)	34-06-S and	0.030	0.01
Dextrin air lock feeder	34-07-S (12/92)		
Dextrin starch cooler	34B-01-S (10/93)	0.042	0.01
Dextrin storage hopper	34B-03-S (10/93)	0.114	0.01
Dextrin starch reactor #2	34B-04-S (10/93)	0.179	0.01
Dextrin feed hoppers: 3 and 4 (System 2)	34B-05-S and	0.030	0.01
#1 and #2 Dextrin air lock feeder	34B-06-S (10/93)		
Dextrin incoming starch batch scale hopper No. 2	34B-13-S (10/93)	0.067	0.01
Feed receiver	35-05-G	0.568	0.01
Dextrin bulk loading equipment	48-09-S-P	0.26	0.01
Receiver for second stage germ dryer	51A-01-G-P	0.19	0.02
Second stage germ dryer exhaust	51A-02-G-P	1.01	0.015
Sulfate bag dumping	52-02-S-P	0.20	0.01
Starch milling system number 1	59-01-S-P	0.43	0.01
Starch milling system number 2	59-02-S-P	0.43	0.01
Starch ring dryer number 2	59-03-S-P	3.50	0.006
Stack serving starch bulk loading equipment (receiver)	76-02-S-P	0.17	0.01
Stack serving starch bulk loading equipment (Railcar loading)	76-03-S-P	0.17	0.01
Stack serving special starch (P.G.) manufacturing equipment system	85-01-S-P	0.24	0.01
Fiber drying equipment	89-01-G (10/95)	4.50	0.01
Wet fiber cyclone receiver	89-02-G (10/95)	0.178	0.01
Rotary feed dryer	89-03-G (10/95)	4.5	0.03
Milled feed hopper	89-04-G (10/95)	0.50	0.01
Feed pelletizing B	91-14-G-P	2.10	0.015
Feed pelletizing C	91-15-G-P	2.10	0.015
Feed pelletizing D	91-16-G-P	0.23	0.01

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Starch conveying system number 46	93-01-W-P	0.17	0.01
Starch conveying system 47	93-02-W-P	0.17	0.02
Dextrin conveying system 48	93-03-W-P	0.17	0.01
Dried corn syrup conveying system, frodex	93-04-W-P	0.069	0.01
Corn syrup solids conveyor equipment	93-05-W-P	0.066	0.01
Stack serving starch packing systems number 1 and 2, building 93 (43 and 44)	93-06-W-P and 93-07-W-P	0.23	0.01
Frodex semibulk packing system, building 93	93-08-W-P	0.083	0.01
Each stack serving bag dump numbers 1 and 2	93-09-W-P and 93-10-W-P	0.10	0.01
Starch bulk loading	93-14-W (2/93)	0.273	0.01
Starch vacuum clean-up system	93-15-W (2/93)	0.021	0.01
Starch mixing and bagging system #1	93-16-W (5/95)	0.130	0.01
Starch mixing and bagging system #2	93-17-W (5/95)	0.264	0.01
New corn syrup spray dryer cooler system number 3 (SIP #2)	100-01-R-P	4.96	0.015
#4 corn syrup spray dryer	100-03-R (93)	4.2	0.01
Carbon regeneration furnace #2	104-01-R (2/96)	0.728	0.015
Soda ash tank	104-02-R (2/96)	0.154	0.02
Filter aid hopper	104-03-R (2/96)	0.044	0.02
Sodium bisulfate bag dump	104-05-R (2/96)	0.080	0.02
Each stack serving bulk corn starch storage bin numbers 20 through 36 (five (5) stacks may operate at one time)	120-01-S-P to 120-17-S-P	0.56	0.01
Gluten dryer system	121-01-G (3/95)	3.0	0.03
Waxy feed drum dryer scrubber	124-01-G-P	11.12	0.03
Waxy feed milling equipment	124-22-G-P	0.051	0.01
Germ dryer/cooler	124A-01-G (11/94)	1.852	0.02
Starch ring dryer number 3	125-01-S-P	3.50	0.006
Waxy bulk cornstarch storage bins numbers 95 through 98 (only one (1) may operate at a time)	126-01-S-P to 126-04-S-P	0.16	0.01
BCD dryer, building 127	127-01-B-P	0.57	0.01
#1 and #2 vacuum cleaner system	127-21-B and 127-22-B (5/93)	0.031	0.01
#1 and #2 BCD storage hopper	127-23-B and 127-24-B (5/93)	0.18	0.01
BCD mill feeder hopper	127-25-B (5/93)	0.028	0.01
BCD packing hopper	127-26-B (5/93)	0.005	0.01
Special starch process with starch dryer number 4, building 128	128-01-S-P	3.5	0.01
Four products blending systems, building 93	130-01-S-P to 130-04-S-P	0.42	0.01
Dextrin blender	130-05-S (7/93)	0.248	0.01
Corn receiving and storage-bin vent #1 and #2	140-01-G and 140-02-G (12/95)	0.343	0.02
Corn receiving and storage-bin vent #3 and #4	140-03-G and 140-04-G (12/95)	0.343	0.02
Corn dump pit	140-05-G (12/95)	1.286	0.01
Corn scale system	140-06-G (12/95)	0.154	0.01
Corn elevator conveying	140-07-G (12/95)	0.086	0.01
		Emission Limit (Units)	Emission Limit (lbs/hr)
(4) AMERICAN STEEL FOUNDRIES-EAST CHICAGO			
Sand kiln and cooler		0.636 lbs/ton	16.29
Sandheater mixing		0.520 lbs/ton	11.44
Electric induction furnaces (2 units)		0.104 lbs/ton	1.248
#2 tumblast with dust collector		0.145 lbs/ton of product	0.678
#3 tumblast with dust collector		0.145 lbs/ton of product	0.678
Shakeout dust collector		0.012 lbs/ton of product	0.384

(5) AMERICAN STEEL FOUNDRY-HAMMOND

Stack serving coil spring grinder numbers 3-0386 and 3-0389	1.083 lbs/ton	0.045
Stack serving coil spring grinder number 3-0244	0.021 lbs/ton	0.040
Tub grinder number 3-0388	0.015 lbs/ton	2.00
Coil spring grinder number 3-0247	0.019 lbs/ton	0.03
Coil spring grinder number 3-0249	3.792 lbs/ton	1.82
Coil spring grinders numbers 3-0385, 3-295, and 3-0233	0.019 lbs/ton	0.05
Shot blast peener number 3-1804	0.011 lbs/ton	0.06
Shot blast peener number 3-1811	0.018 lbs/ton	0.06
Shot blast peener number 3-1821	0.016 lbs/ton	0.06
Shot blast peener number 3-1823	0.016 lbs/ton	0.06
Small coil manufacturing (ESP number 3-3024)	0.014 lbs/ton	0.02
Medium coil manufacturing (ESP number 3-3027)	0.700 lbs/ton	2.10
Large coil manufacturing (ESP number 3-3028)	0.700 lbs/ton	3.50
Miscellaneous coil manufacturing (ESP number 3-3026)	0.700 lbs/ton	1.05

(6) AMOCO OIL, WHITING REFINERY BP PRODUCTS NORTH AMERICA INC.

Number 1 CRU, F-101 feed preheater	0.004 lbs/MMBtu	0.267
Stack serving number 1 CRU, F-102, F-201, F-202 heaters	0.004 lbs/MMBtu	0.290
Stack serving number 1 power station, boiler numbers 1, 2, 3, and 4	0.016 lbs/MMBtu	15.809
Stack serving number 1 power station, boiler numbers 5, 6, 7, and 8	0.016 lbs/MMBtu	13.244
Stack serving number 11 pipe still furnaces H-101, H-102, H-103, H-104, coke preheaters	0.004 lbs/MMBtu	0.741
Number 11 pipe still, H-1X heater	0.031 lbs/MMBtu	6.867
Number 11 pipe still, H-2 vacuum heater	0.032 lbs/MMBtu	1.440
Number 11 pipe still, H-200 crude charge	0.032 lbs/MMBtu	7.866
Number 11 pipe still, H-3 vacuum heater	0.031 lbs/MMBtu	1.704
Number 11 pipe still, H-300 furnace	0.031 lbs/MMBtu	4.931
Stack serving number 12 pipe still, H-1A and H-1B preheaters and H-2 vacuum heater	0.025 lbs/MMBtu	16.348
Each stack serving number 12 pipe still, H-1CN and H-1CS crude preheater	0.004 lbs/MMBtu	0.444
Number 12 pipe still, H-1CX crude preheater	0.004 lbs/MMBtu	0.924
Number 2 isomerization, F-7 furnace	0.004 lbs/MMBtu	0.085
Number 2 isomerization, H-1 feed heater furnace	0.004 lbs/MMBtu	0.704
Each stack serving number 3 power station, boiler numbers 1, 2, 3, 4, and 6	0.030 lbs/MMBtu	17.49
Number 3 ultraformer, F-7 furnace	0.004 lbs/MMBtu	0.085
Number 3 ultraformer, H-1 feed heater furnace	0.004 lbs/MMBtu	0.852
Number 3 ultraformer, H-2 feed heater furnace	0.004 lbs/MMBtu	0.685
Number 3 ultraformer, waste heat recovery unit	0.004 lbs/MMBtu	1.537
Stack serving number 37 pipe still, B-1 feed preheater, B-2 wax fractioner	0.018 lbs/MMBtu	1.903
Stack serving number 4 ultraformer, F-1 ultrafiner furnace F-8A and F-8B reboilers	0.004 lbs/MMBtu	1.459
Number 4 ultraformer, F-2 preheater furnace	0.004 lbs/MMBtu	1.059
Number 4 ultraformer, F-3 number 1 reheat furnace	0.004 lbs/MMBtu	0.896
Stack serving number 4 ultraformer, F-4 number 2 reheat furnace, F-5 number 3 reheat furnace, and F-6 number 4 reheat furnace	0.004 lbs/MMBtu	1.060
Number 4 ultraformer, F-7 furnace	0.004 lbs/MMBtu	0.159
Aromatics recovery unit, F-200A furnace	0.004 lbs/MMBtu	0.924
Aromatics recovery unit, F-200B furnace	0.004 lbs/MMBtu	0.924
Blending oil desulphurization, F-401 furnace	0.004 lbs/MMBtu	0.130
Cat feed hydrotreating unit	0.004 lbs/MMBtu	0.246
F-1 Berry Lake distillate heater	0.004 lbs/MMBtu	0.048
F-2 Steiglitz Park residual heater	0.008 lbs/MMBtu	0.208
Stack serving heavy oils unit, H-101, H-201, H-202	0.004 lbs/MMBtu	0.030
NMP extraction unit, B-105 furnace	0.023 lbs/MMBtu	1.174
NMP extraction unit, B-106 furnace	0.004 lbs/MMBtu	0.352
Oil hydrotreating unit	0.004 lbs/MMBtu	0.059
Sulfur recovery unit incinerator	0.004 lbs/MMBtu	0.090
Asphalt oxidizer number 1	0.000 lbs/ton	0.000
Asphalt oxidizer number 2	0.000 lbs/ton	0.000
Asphalt oxidizer number 3	0.000 lbs/ton	0.000
Tail gas unit (new)	0.110 lbs/ton	0.103

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Wastewater sludge fluid bed incinerator	0.173 lbs/ton based on 79,000 lbs/hr fluidizing air flow	6.84
FCU 500	1.220 lbs/1,000 lbs coke burned	73.20
FCU 600	1.10 lbs/1,000 lbs coke burned	55.00
DDU WB-301	0.004 lbs/MMBtu	0.250
DDU WB-302	0.004 lbs/MMBtu	0.240
Hydrogen unit B-1	0.009 lbs/MMBtu	3.340
(7) ASSOCIATED BOX		
Wood chip fired space heating boiler	0.810 lbs/MMBtu	4.450
(8) BUCKO CONSTRUCTION		
Rotary dryer	0.017 lbs/hr	4.440
(9) SMITH READY MIX		
Central mix	0.0013 lbs/ton	0.350
(10) STATE LINE ENERGY, LLC		
Unit 3	0.100 lbs/MMBtu	213.00
Unit 4	0.100 lbs/MMBtu	356.80
(11) E.I. DUPONT		
Sodium silicate furnace	1.439 lbs/ton	6.0
(12) GENERAL REFRACTORY		
Ball milling storage	0.041 lbs/ton	0.410
Crushing and sizing	0.012 lbs/ton	0.460
Material handling system	0.003 lbs/ton	0.220
Material loading	0.006 lbs/ton	0.150
Material weighing	0.064 lbs/ton	0.350
Mixing and packaging	0.354 lbs/ton	2.480
Sizing, conveying, and storage	0.029 lbs/ton	0.580
(13) GEORGIA PACIFIC		
Boiler number 1	0.129 lbs/MMBtu	9.380
(14) GLOBE INDUSTRIES		
Stack serving asphalt saturators (2 units)	0.060 lbs/ton of product	4.500
(15) HAMMOND GROUP INC. (HGI)		
Stack 17-S-40	0.030 gr/dscf	2.120
Stack 20-S-36	0.022 gr/dscf	0.395
Stack 20-S-41	0.022 gr/dscf	0.450
Stack 20-S-37	0.022 gr/dscf	0.200
Stack 20-S-38	0.022 gr/dscf	0.087
Stack 17-S-25	0.030 gr/dscf	2.120
Stack 20-S-42	0.022 gr/dscf	0.200
Stack 20-S-43	0.022 gr/dscf	0.087
Stack 20-S-39	0.022 gr/dscf	0.496
Stack 20-S-44	0.022 gr/dscf	0.496
Stack 13-S-48	0.022 gr/dscf	0.471
Stack 14-S-45	0.022 gr/dscf	0.471
(16) HAMMOND GROUP INC.-HALSTAB DIVISION		
Stack S-1	0.022 gr/dscf	0.220
Stack S-2	0.022 gr/dscf	0.080
Stack S-4	0.022 gr/dscf	1.460
Stack S-5	0.022 gr/dscf	1.030
Stacks S-6, S-7, and S-8, each stack	0.022 gr/dscf	0.570
Stacks S-9, S-10, S-11, S-12, S-13, S-14, S-15, and S-16, each stack	0.022 gr/dscf	0.200
Stack S-17	0.022 gr/dscf	1.990
(17) HAMMOND GROUP INC. (HGI)		
Stack 1-S-54	0.0 gr/dscf	0.000
Stack 4A-S-8	0.022 gr/dscf	0.250
Stack 14-S-16	0.022 gr/dscf	0.250
Stack 1-S-2	0.022 gr/dscf	0.250
Stack 1-S-26	0.022 gr/dscf	0.250
Stack 16-S-56	0.022 gr/dscf	1.000

Stack 1-S-52	0.022 gr/dscf	1.000
Stack 1-S-27	0.022 gr/dscf	0.290
Stack 4-S-35	0.022 gr/dscf	0.570
Stack 6-S-33	0.022 gr/dscf	0.900
Stack 4B-S-34	0.022 gr/dscf	0.400
Stack 6-S-47	0.022 gr/dscf	0.400
V-1	0.022 gr/dscf	1.000
Stack 14-S-15	0.022 gr/dscf	0.320
<b>(18) HARBISON-WALKER REFRACTORIES, HAMMOND WORKS</b>		
Each stack serving tunnel kiln numbers 1 (S-6) and 2 (S-3)	1.36 lbs/ton	4.50
Each stack serving tunnel kiln numbers 1 (S-6) and 2 (S-3) if only one kiln is in operation	1.36 lbs/ton	8.40
Lanley oven (S-7)	0.210 lbs/ton	0.840
Basic dryer (stack 8)	0.916 lbs/ton	3.020
Chrome ore crushing (D-9)	0.024 lbs/ton	0.490
Chrome ore rotary dryer (D-10)	0.032 lbs/ton	0.640
Chrome ore handling (D-11) and storage	0.020 lbs/ton	0.410
Chrome ore screening (D-12) and milling	0.078 lbs/ton	1.240
Chrome ore finished (D-13) material handling and storage	0.044 lbs/ton	0.700
Magnesite unloading and crushing (D-18)	0.017 lbs/ton	0.580
Magnesite material handling and storage (D-2)	0.012 lbs/ton	0.410
Magnesite screening and milling (D-8)	0.051 lbs/ton	1.280
Specialty magnesite handling system (D-16)	0.097 lbs/ton	0.260
Magnesite chrome ore mixer number 3 (D-6)	0.033 lbs/ton	0.230
Magnesite chrome ore mixer number 2 and flat mixer (D-5)	0.033 lbs/ton	0.460
Magnesite chrome ore mixer number 1 (D-4)	0.033 lbs/ton	0.230
Magnesite carbon mixers (D-7)	0.054 lbs/ton	0.460
Magnesite smooth roll crusher system (D-15)	0.067 lbs/ton	0.500
Magnesite auxiliary milling system (D-14)	0.086 lbs/ton	0.170
<b>(19) INLAND STEEL</b>		
Number 4 slab mill scarfer	0.039 lbs/ton	21.97
Number 2A bloomer scarfer	0.107 lbs/ton	10.70
Mold foundry baghouse	0.011 gr/dscf	26.00
Sinter plant discharge end and cooler baghouse	0.01 gr/dscf TSP	11.70 TSP
Sinter plant windbox baghouse	0.007 gr/dscf TSP	17.00 TSP
Lime plant silo baghouses	0.085 lbs/ton	5.530
Lime plant firing and kiln baghouses	0.110 lbs/ton	7.149
Number 4 roll shop erwin blaster/baghouse	0.0052 gr/dscf TSP	0.210 TSP
Number 4 roll shop wheelabrator baghouse	0.0052 gr/dscf TSP	0.260 TSP
Number 4A roll shop erwin blaster/baghouse	0.0052 gr/dscf TSP	0.210 TSP
Number 4A roll shop pangborn blaster/baghouse	0.0052 gr/dscf TSP	0.260 TSP
Number 2 roll shop pangborn blaster/baghouse	0.0052 gr/dscf TSP	0.270 TSP
Number 6 roll shop roll blaster/baghouse	0.0052 gr/dscf TSP	0.200 TSP
Electric shop blasters/baghouses	0.0052 gr/dscf TSP	1.070 TSP
Number 11 coke battery preheaters (2 units)	0.00	0.00
Number 11 coke battery shed baghouse	0.00	0.00
Number 6 coke battery underfire stack	0.00	0.00
Number 7 coke battery underfire stack	0.00	0.00
Number 8 coke battery underfire stack	0.00	0.00
Number 9 coke battery underfire stack	0.00	0.00
Number 10 coke battery underfire stack	0.00	0.00
Number 11 coke battery underfire stack	0.00	0.00
Number 7B blast furnace canopy baghouse	0.003 gr/dscf	11.22
Number 7 blast furnace stockhouse pellet baghouse	0.0052 gr/dscf	4.00
Number 7 blast furnace casthouse baghouse	0.011 gr/dscf TSP	22.00 TSP
Number 7 blast furnace coke screening baghouse	0.007 gr/dscf TSP	4.200 TSP
Number 7 blast furnace stockhouse coke baghouse	0.01 gr/dscf TSP	2.00 TSP
Number 1 blast furnace stoves (4 units)	0.000	0.000
Number 2 blast furnace stoves (4 units)	0.000	0.000
Number 2 basic oxygen furnace number 10 furnace stack	0.058 lbs/ton TSP	16.00 TSP
Number 2 basic oxygen furnace number 20 furnace stack	0.058 lbs/ton TSP	16.00 TSP
Number 2 basic oxygen furnace caster fume collection baghouse	0.0052 gr/dscf TSP	2.00 TSP
Number 2 basic oxygen furnace ladle metallurgical station baghouse	0.0052 gr/dscf TSP	2.00 TSP



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Number 2 basic oxygen furnace secondary ventilation system scrubber	0.015 gr/dscf TSP	12.00 TSP
Number 2 basic oxygen furnace tundish dump baghouse	0.0052 gr/dscf TSP	2.200 TSP
Number 2 basic oxygen furnace charging aisle reladling and desulfurization baghouse	0.011 gr/dscf TSP	28.30 TSP
Number 2 basic oxygen furnace truck and ladle hopper baghouse	0.0052 gr/dscf TSP	0.800 TSP
Number 2 basic oxygen furnace flux storage and batch baghouse	0.0052 gr/dscf TSP	0.530 TSP
Number 4 basic oxygen furnace reladling and desulfurization baghouse	0.0052 gr/dscf TSP	8.26 TSP
Number 4 basic oxygen furnace scrubber stack (steelmaking)	0.187 lbs/ton TSP	100.00 TSP
Number 4 basic oxygen furnace vacuum degassing baghouse	0.01 gr/dscf TSP	4.280 TSP
Number 4 basic oxygen furnace secondary ventilation system baghouse	0.006 gr/dscf TSP	22.30 TSP
Stack serving blast furnace stove, number 5 (3 units)	0.016 lbs/MMBtu	4.70
Stack serving blast furnace stove, number 6 (4 units)	0.016 lbs/MMBtu	3.64
Stack serving blast furnace stove, number 7 (3 units)	0.0076 lbs/MMBtu	6.32
Stack serving "A" blast furnace stoves (3 units)	0.021 lbs/MMBtu	5.090
Stack serving "B" blast furnace stoves (3 units)	0.021 lbs/MMBtu	5.090
100 inch plate mill reheat furnace	0.078 lbs/MMBtu	13.74
Number 2 bloom mill soaking pit, numbers 1 through 4	0.000	0.000
Number 2 bloom mill soaking pit numbers 5 through 16 collective	0.000	0.000
Number 2 bloom mill soaking pit numbers 19 through 20 collective	0.000	0.000
Number 4 slabber soaking pit numbers 1 through 18 collective	0.0 lbs/MMBtu	0.0
Number 4 slabber soaking pit numbers 19 through 45 collective	0.006 lbs/MMBtu	1.750
Stack serving number 2AC station boiler numbers 207 through 210	0.000	0.000
Stack serving number 2AC station boiler numbers 211 through 213	0.018 lbs/MMBtu	16.20
Stack serving number 3AC station boiler numbers 301 through 304	0.018 lbs/MMBtu	16.20
Number 3AC station boiler number 305	0.018 lbs/MMBtu	5.400
Stack serving number 4AC station boiler number 401 through 404	0.042 lbs/MMBtu	76.578
Number 4AC station boiler number 405	0.028 lbs/MMBtu	18.78
Stack serving number 5 boiler house (3 units)	0.013 lbs/MMBtu	18.05
Electric arc furnace shop direct shell evacuation system baghouse roof monitor	0.0052 gr/dscf	17.14
Electric arc furnace shop ladle metallurgical station baghouse	0.01 gr/dscf	0.820
Coal conveyor transfer baghouse A	0.003 gr/dscf	0.17
Blending system baghouse B	0.003 gr/dscf	0.54
Coal storage bin baghouse C	0.003 gr/dscf	0.23
Coal pulverizer baghouse D	0.0015 gr/dscf	0.93
Coal pulverizer baghouse E	0.0015 gr/dscf	0.93
Number 7 blast furnace coal storage bin baghouse F	0.003 gr/dscf	0.09
Number 7 blast furnace coal storage bin baghouse G	0.003 gr/dscf	0.09
Numbers 5 and 6 blast furnace coal storage bin baghouse H	0.003 gr/dscf	0.09
<b>(20) KEIL CHEMICAL-DIVISION OF FERRO CORPORATION</b>		
Cleaver brooks boiler B-4	0.007 lbs/MMBtu	0.09
Cleaver brooks boiler B-5	0.007 lbs/MMBtu	0.14
VA power B-3 boiler	0.007 lbs/MMBtu	0.04
Chlorinated wax process	0.001 lbs/ton	0.003
Pyro-chek 68PB1	0.052 lbs/ton	0.030
Pyro-chek 77PB2	0.122 lbs/ton	0.040
Sulfurized fat process	0.157 lbs/ton	0.230
<b>(21) THE CHINET COMPANY</b>		
Molded pulp dryer number 1	0.546 lbs/ton	0.210
Molded pulp dryer number 2	0.546 lbs/ton	0.250
Molded pulp dryer number 3	0.546 lbs/ton	0.290
Molded pulp dryer number 4	0.546 lbs/ton	0.290
Molded pulp dryer number 5	0.546 lbs/ton	0.130
Molded pulp dryer number 6	0.546 lbs/ton	0.130
Molded pulp dryer number K34	0.546 lbs/ton	0.130
Molded pulp dryer number 8	0.546 lbs/ton	0.350
Molded pulp dryer number 9	0.546 lbs/ton	0.410
Molded pulp dryer number 10	0.546 lbs/ton	0.350
Babcock and Wilcox boiler	0.007 lbs/MMBtu	0.050
<b>(22) LTV STEEL CORPORATION</b>		
Stack serving number 3 blast furnace stoves	0.027 lbs/MMBtu	11.73
Stack serving number 4 blast furnace stoves	0.027 lbs/MMBtu	12.93
Stack serving hot strip mill slab heat furnace numbers 1, 2, and 3	0.086 lbs/MMBtu	36.56
Utility boiler number 3	0.066 lbs/MMBtu	12.85

Utility boiler number 4	0.066 lbs/MMBtu	12.85
Utility boiler number 5	0.066 lbs/MMBtu	25.69
Utility boiler number 6	0.066 lbs/MMBtu	25.69
Utility boiler number 7	0.066 lbs/MMBtu	25.69
Utility boiler number 8	0.066 lbs/MMBtu	61.59
Basic oxygen furnace main stack	0.018 gr/dscf	69.40
Reladling and desulfurization baghouse	0.008 gr/dscf	10.49
Ladle metallurgical station baghouse	0.004 gr/dscf	3.630
Sinter plant breaker discharge end	0.02 gr/dscf TSP	18.05 TSP
Sinter plant windbox stack 08	0.02 gr/dscf TSP	49.70 TSP
<b>(23) UNILEVER HPC, USA</b>		
Boiler house, building number 8, boiler number 2	0.116 lbs/MMBtu	9.570
Stack serving boiler house, building number 8, boiler numbers 3 and 4	0.116 lbs/MMBtu	18.88
Dowtherm boiler, DEFI process building 6	0.004 lbs/MMBtu	2.700
Milling and pelletizer soap dust collection system (DC-1), building number 15	0.020 gr/dscf	1.03
Powder dye dust collector system (DC-4), building number 15	0.020 gr/dscf	0.130
Schenble wet scrubber and demister collector system, building number 15	0.030 gr/dscf	1.030
Each stack serving detergent bar soap noodle bins numbers 1, 2, and 3 dust collection system (DC-5, DC-6, and DC-7)	0.020 gr/dscf	0.210
Stack serving chip mixers numbers 1, 2, and 3 soap dust collection system, building number 15 (DC-8, DC-9, and DC-10)	0.020 gr/dscf	0.720
Rework soap dust collection system (DC-3), building number 15	0.020 gr/dscf	0.800
Three chill rolls and apron conveyors (DC-2), building number 15	0.020 gr/dscf	1.090
High titer granules and chips manufacturing process, building number 6	0.930 lbs/ton	3.500
Detergent bar soap manufacturing process number 1, stack 7, building number 6	1.140 lbs/ton	4.000
Detergent bar soap manufacturing process number 2, stack 16A, building number 6	1.140 lbs/ton	4.000
Bulk fitrol unloading bleached earth dust collection system, building number 1	0.020 gr/dscf	0.070
Oil refinery/filter aid bag dumping operation, building number 1	0.020 gr/dscf	0.220
3 soap dryers dust collection system, building number 14	0.020 gr/dscf	0.120
6 noodle bins and 1 scrap kettle dust collection system, building number 3	0.020 gr/dscf	0.860
Dust collector system for soap rework grinding process, building number 14	0.020 gr/dscf	0.250
Stack serving hard soap finishing lines numbers 1, 2, 3, 5, 7, and 8 dust collection system (DC), building number 14	0.020 gr/dscf	1.540
Sulfonation process	0.205 lbs/ton	0.390
Soap dryer cleanout system, tank number 1, building number 14	0.030 gr/dscf	0.390
Soap dryer cleanout system, tank number 2, building number 14	0.030 gr/dscf	0.300
Crude glycerine filter aid dust collection system, building number 2	0.020 gr/dscf	0.130
Glycerine carbon handling dust collection system, building number 2	0.020 gr/dscf	0.170
Bulk urea handling system, new detergent bulk soap, building number 15A	0.020 gr/dscf	0.100
American hydrotherm boiler 2, stack 1A, building number 15A	0.150 lbs/MMBtu	1.830
Schenble wet scrubber and demister collection system, stack 2A, building number 15A	0.030 gr/dscf	1.030
Flex Kleen dust collection system DC-1053, stack 3A, building number 15A	0.020 gr/dscf	0.940
Flex Kleen dust collection system DC-1054, stack 4A, building number 15A	0.020 gr/dscf	0.940
Flex Kleen dust collection system DC-1055, stack 5A, building number 15A	0.020 gr/dscf	0.940
Flex Kleen dust collection system DC-1056, stack 6A, building number 15A	0.020 gr/dscf	0.940
Flex Kleen dust collection system DC-1050, stack 7A, building number 15A	0.020 gr/dscf	2.130
Flex Kleen dust collection system DC-1052, stack 8A, building number 15A	0.020 gr/dscf	2.130
Bulk Borax unloading to storage silo, stack 9A, building number 8	0.020 gr/dscf	0.130
Oil refinery/filter aid mixing tank number 44, building number 1, stack 15A	0.060 lbs/ton	0.030
Sample detergent bar soap line operation, building 14, stack 17A	0.002 lbs/ton	0.002
<b>(24) MARBLEHEAD LIME COMPANY</b>		
Flue dust loadout number 1 (MHL 14)	0.003 lbs/ton	0.110
Flue dust loadout number 2 (MHL 15)	0.003 lbs/ton	0.100
Lime grinder (MHL 13)	0.015 lbs/ton	0.440
Lime handling baghouse number 1 (MHL 6)	0.002 lbs/ton	0.260
Lime handling baghouse number 2 (MHL 7)	0.002 lbs/ton	0.180
Lime handling baghouse number 3 (MHL 8)	0.0004 lbs/ton	0.050
Lime handling baghouse number 4 (MHL 9)	0.001 lbs/ton	0.130
Lime loadout baghouse number 1 (MHL 10)	0.0004 lbs/ton	0.050
Lime loadout baghouse number 2 (MHL 11)	0.0004 lbs/ton	0.050

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Lime loadout baghouse number 3 (MHL 12)	0.004 lbs/ton	0.410
Lime rotary kiln number 1	0.478 lbs/ton	9.950
Lime rotary kiln number 2	0.478 lbs/ton	9.950
Lime rotary kiln number 3	0.478 lbs/ton	9.950
Lime rotary kiln number 4	0.478 lbs/ton	9.950
Lime rotary kiln number 5	0.478 lbs/ton	9.950
(25) MARPORT SMELTING		
North baghouse	0.601 lbs/ton	2.300
South baghouse	1.279 lbs/ton	4.900
(26) METHODIST HOSPITAL		
Boiler number 1	0.044 lbs/MMBtu	0.350
(27) NATIONAL RECOVERY SYSTEMS		
Drying system	0.203 lbs/ton	4.060
Material storage handling	0.034 lbs/ton	0.680
Each stack serving lime fines storage silos (two (2) stacks)	0.001 lbs/ton	0.012
(28) NIPSCO-MITCHELL		
(A) Boiler numbers 4, 5, 6, and 11:		
(i) Operation under either item (ii)(BB) or (ii)(CC) shall only be allowed provided that a nozzle is in the stack serving boiler numbers 4 and 5 such that the stack diameter is restricted to eight and three-tenths (8.3) feet.		
(ii) NIPSCO may operate under any one (1) of the following scenarios:		
(AA) Boiler numbers 4, 5, 6, and 11 may operate simultaneously under the following conditions:		
(aa) One (1) of boiler number 4 or 5 may operate on coal if the other boiler is operated on natural gas or is not operating. Particulate emissions from the stack serving boiler numbers 4 and 5 shall be limited to one-tenth (0.1) pound per million Btu and one hundred twenty-eight and seventy-five hundredths (128.75) pounds per hour.		
(bb) Boiler numbers 6 and 11 may operate simultaneously on coal. Particulate emissions from the stack serving boiler numbers 6 and 11 shall be limited to one-tenth (0.1) pound per million Btu and two hundred thirty-six (236) pounds per hour.		
(BB) Boiler numbers 4, 5, 6, and 11 may operate simultaneously on coal subject to the following conditions:		
(aa) Particulate emissions from the stack serving boiler numbers 4 and 5 shall be limited to seventy-four thousandths (0.074) pound per million Btu and one hundred eighty-five (185) pounds per hour.		
(bb) Particulate emissions from the stack serving boiler numbers 6 and 11 shall be limited to seventy-four thousandths (0.074) pound per million Btu and one hundred seventy-five (175) pounds per hour.		
(CC) One (1) set of either boiler numbers 4 and 5 or 6 and 11 may operate on coal, if the other set is not operating, subject to the following conditions:		
(aa) Particulate emissions from the stack serving boiler numbers 4 and 5 shall be limited to one-tenth (0.1) pound per million Btu and two hundred fifty (250) pounds per hour.		
(bb) Particulate emissions from the stack serving boiler numbers 6 and 11 shall be limited to one-tenth (0.1) pound per million Btu and two hundred thirty-six (236) pounds per hour.		
(iii) NIPSCO shall maintain a daily log of the following for boiler numbers 4, 5, 6, and 11:		
(AA) Fuel type.		
(BB) Transition time of changes between or within operating scenarios.		
The log shall be maintained for a minimum of five (5) years and shall be made available to the department and U.S. EPA upon request.		
(iv) Emission limits shall be maintained during transition periods within or between operating scenarios.		
(B) Upon the effective date of this amended rule, biennial stack testing shall be conducted in the stack serving boiler numbers 4 and 5 and in the stack serving boiler numbers 6 and 11, meeting the following conditions:		
(i) Stack testing shall begin within sixty (60) days and be completed within ninety (90) days of the initial use of the operating scenario specified in clause (A)(ii)(BB). Particulate emissions from boiler numbers 4, 5, 6, and 11 shall be limited to seventy-four thousandths (0.074) pound per million Btu.		

(ii) After the initial stack test specified in item (i), NIPSCO may use the operating scenario specified in clause (A)(ii)(BB) if in the previous biennial stack test particulate emissions from boiler numbers 4, 5, 6, and 11 met the emission limitation of seventy-four thousandths (0.074) pound per million Btu.

(iii) If the operating scenario specified in clause (A)(ii)(BB) has not been used since the previous biennial stack test specified in this clause, then particulate emissions from boiler numbers 4, 5, 6, and 11 shall be limited to one-tenth (0.1) pound per million Btu.

(iv) If the operating scenario specified in clause (A)(ii)(BB) has been used since the previous biennial stack test specified in this clause, and NIPSCO no longer has the ability to operate the boilers as specified in clause (A)(ii)(BB), then particulate emissions from boiler numbers 4, 5, 6, and 11 shall be limited to one-tenth (0.1) pound per million Btu.

All emissions testing shall be conducted in accordance with the procedures specified in 326 IAC 3-6. Records of stack test data shall be maintained for a minimum of five (5) years and shall be made available to the department and U.S. EPA upon request.

(29) PREMIER CANDY COMPANY		
Boiler number 1 (North)	0.069 lbs/MMBtu	0.420
Boiler number 2 (South)	0.069 lbs/MMBtu	0.450
(30) LASALLE STEEL COMPANY		
Fume scrubber	0.015 lbs/ton	0.060
Number 11 furnace precipitator	0.548 lbs/ton	0.940
Stack serving shot blast baghouse (2 units)	0.001 lbs/ton	0.020
(31) REED MINERALS PLANT #14		
Fluidized bed dryer	0.015 gr/dscf	3.5
Crushing and screening	0.015 gr/dscf	9.0
(32) RHODIA, INC.		
Package boiler	0.007 lbs/MMBtu	0.755
Preheater	0.007 lbs/MMBtu	0.230
Sulfuric acid production unit number 4	0.150 lbs/ton acid produced	6.958 acid mist
(33) PRAXAIR		
Cylinder paint spray booth, stack 033	42.5 lbs/ton	0.340
Drum+ shotblaster and baghouse, stack 075	0.002 gr/dscf	0.028
Drum paint spray booth, stack 073	42.5 lbs/ton	0.340
Cylinder shotblaster number 2 baghouse, stack 030	0.004 gr/dscf	0.042
Generators, numbers 1 through 6	0.008 lbs/MMBtu	0.279
Cylinder shotblaster number 1 baghouse, stack 031	0.002 gr/dscf	0.020
(34) UNION TANK CAR COMPANY		
Grit blaster	0.01 gr/dscf	9.9
(35) U.S. GYPSUM COMPANY		
Raw material handling		
Rail car unloading, stack J10	0.010 gr/dscf	0.070
Each stack serving raw material conveying and storage, stacks J11, J12, and J13	0.015 gr/dscf	0.190
Rock handling process		
Drying, grinding, and calcining, stack M1	0.012 gr/dscf	3.210
Stucco elevating and conveying, stack M2	0.015 gr/dscf	2.210
Franklin fiber process, stack M6	0.011 gr/dscf	0.313
Wallboard manufacturing process		
Paper grinding and stucco system, stack B1	0.020 gr/dscf	2.230
Wallboard end sawing, stack B2	0.020 gr/dscf	0.860
Speciality board manufacturing process (kerfing), stack B3	0.020 gr/dscf	0.260
Each stack serving ready mix process, stacks J1, J2, and J3	0.017 lbs/ton	0.100
Dry texture paint process		
Mixing and packing, stack J4	0.020 gr/dscf	0.190
Bag dumping, stack J5	0.010 gr/dscf	0.100
Dry additive conveying, stack J6	0.010 gr/dscf	0.030
Dry joint compound process		
Mixing and packing, stack J7	0.020 gr/dscf	0.340
Additive air conveying, stack J8	0.010 gr/dscf	0.34
Panel saw process	0.020 gr/dscf	0.140
(36) USS-Gary Works		
Each stack serving number 3 sinter plant coolers	0.03 gr/dscf TSP	154.3 TSP
Number 3 sinter plant discharge area baghouse	0.02 gr/dscf	5.12
Number 3 sinter plant screening station baghouse	0.0052 gr/dscf	7.5

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S1/S2 baghouse	0.0052 gr/dscf	0.83
Number 3 sinter plant storage bins building baghouse	0.01 gr/dscf	1.300
Each stack serving number 3 sinter plant windbox stacks	0.065 gr/dscf TSP	167.1
Number 2 QBOP flux handling lime baghouse	0.01 gr/dscf	2.600
Coke battery number 2 underfire stack	0.05 gr/dscf	27.54
Coke battery number 3 underfire stack	0.05 gr/dscf	42.140
Coke battery number 5 underfire stack	0.05 gr/dscf	16.80
Coke battery number 7 underfire stack	0.05 gr/dscf	20.40
Each stack serving number 2 precarbon building precipitators (3 units)	0.06 gr/dscf	2.5
Each stack serving number 3 precarbon building precipitators (3 units)	0.06 gr/dscf	2.5
Each stack serving number 1 BOP gas cleaning (2 units)	0.02 gr/dscf	17.2
Each stack serving number 2 QBOP gas cleaning (2 units)	0.02 gr/dscf	18.20
Number 2 QBOP hot metal desulfurization baghouse (8 stacks)	0.0052 gr/dscf	1.44
New 2 QBOP secondary baghouse	0.0052 gr/dscf	25.9
Number 1 basic oxygen furnace iron desulfurization baghouse	0.01 gr/dscf	9.32
Number 2 QBOP ladle metal baghouse number 1	0.01 gr/dscf	6.86
Number 2 QBOP ladle metal baghouse number 2	0.01 gr/dscf	2.44
Number 2 QBOP ladle metallurgy facility number 3 reheat furnace hot fume extraction and material handling baghouse	0.01 gr/dscf	4.33
Number 13 blast furnace sinter screening station number 13 baghouse	0.02 gr/dscf	2.5
Stack serving blast furnace stove number 4	0.029 lbs/MMBtu	11.60
Stack serving blast furnace stove number 6	0.029 lbs/MMBtu	11.6
Stack serving blast furnace stove numbers 7 and 8	0.029 lbs/MMBtu	23.20
Stack serving blast furnace stove number 13	0.015 lbs/MMBtu	21.20
Each stack serving boiler house number 4	0.036 lbs/MMBtu	13.155
Number 2 coke plant boiler house; boiler number 3	0.020 lbs/MMBtu	2.7
Stack serving number 2 coke plant boiler house; boiler numbers 4 and 5	0.033 lbs/MMBtu	10.0
Number 2 coke plant boiler house; boiler number 6	0.020 lbs/MMBtu	3.000
Number 2 coke plant boiler house; boiler number 7	0.011 lbs/MMBtu	1.800
Number 2 coke plant boiler house; boiler number 8	0.011 lbs/MMBtu	2.61
Each stack serving turboblower boiler numbers 1 through 5	0.025 lbs/MMBtu	8.400
Turboblower boiler number 6	0.025 lbs/MMBtu	16.58
Each stack serving 84 inch hot strip mill; reheat furnaces (four (4) units)	0.064 lbs/MMBtu	28.2
84 inch hot strip mill; waste heat boiler number 1	0.064 lbs/MMBtu	10.9
84 inch hot strip mill; waste heat boiler number 2	0.064 lbs/MMBtu	12.8
Each stack serving 160/210 inch plate mill; batch reheat furnace numbers 1 through 4	0.011 lbs/MMBtu	0.33
160/210 inch plate mill; continuous reheat furnace number 1	0.011 lbs/MMBtu	2.75
160/210 inch plate mill; continuous reheat furnace number 2	0.011 lbs/MMBtu	2.75
Stack serving 160/210 inch continuous heat treating furnaces 1; 2; 3; and 4	0.011 lbs/MMBtu	1.1
Coke battery #2 precarbonization system electrostatic precipitators	0.1879 gr/dscfm	33.83
Coke battery #3 precarbonization system electrostatic precipitators	0.1016 gr/dscfm	20.37
Number 3 sinter plant coolers	0.0300 gr/dscfm	272.57
Number 3 sinter plant discharge area baghouses	0.0200 gr/dscfm	41.14
Number 3 sinter plant sinter screening station baghouse	0.0100 gr/dscfm	10.89
Number 3 sinter plant storage bins building baghouse	0.0100 gr/dscfm	0.43
Number 3 sinter plant windbox stacks	0.0188 gr/dscfm	79.11
Number 4 boiler house boilers	0.029 lbs/MMBtu	42.815
Plate mill batch reheat furnaces nos. 6 and 8	0.012 lbs/MMBtu	0.870
Plate mill continuous reheat furnaces 1 and 2	0.012 lbs/MMBtu	4.641
84" HSM reheat furnaces nos. 1, 2, 3, and 4	0.012 lbs/MMBtu	23.204
84" HSM waste heat boiler no. 1	0.045 lbs/MMBtu	10.00
84" HSM waste heat boiler no. 2	0.045 lbs/MMBtu	10.00
Blast furnace no. 13 stoves	0.027 lbs/MMBtu	22.465
Blast furnace no. 4 stoves	0.037 lbs/MMBtu	12.800
Blast furnace no. 6 stoves	0.037 lbs/MMBtu	12.800
Blast furnace no. 8 stoves	0.039 lbs/MMBtu	12.800
Coke battery number 2/3 quench tower numbers 2/3	not applicable	4.6574
Coke battery number 2 underfiring stack	not applicable	51.235
Coke battery number 3 underfiring stack	not applicable	35.838
Coke battery number 5/7 quench tower numbers 5/6	not applicable	1.8119
Coke battery number 5 underfiring stack	not applicable	22.352
Coke battery number 7 underfiring stack	not applicable	15.200

Coke plant boiler house, boiler numbers 1 and 2	0.008 lbs/MMBtu	1.926
Coke plant boiler house, boiler number 3	0.012 lbs/MMBtu	1.810
Coke plant boiler house, boiler numbers 4 and 5	0.012 lbs/MMBtu	3.921
Coke plant boiler house, boiler number 6	0.012 lbs/MMBtu	1.961
Coke plant boiler house, boiler number 7	0.012 lbs/MMBtu	1.879
Coke plant boiler house, boiler number 8	0.008 lbs/MMBtu	1.844
Number 1 BOP hot metal desulf baghouse	0.0100 gr/dscfm	17.14
Number 2 Q-BOP LMF Numbers 1 and 2 material handling baghouse	0.0035 gr/dscfm	5.10
Number 2 Q-BOP LMF number 3 hot fume exhaust/material handling baghouse	0.0070 gr/dscfm	2.70
Number 2 Q-BOP hot metal desulf baghouse	0.0035 gr/dscfm	7.50
Number 1 BOP gas cleaning system	0.0183 gr/dscfm	76.42
Number 2 Q-BOP gas cleaning system	0.0183 gr/dscfm	54.20
TBBH boiler number 6	0.029 lbs/MMBtu	20.266
TBBH boiler numbers 1, 2, 3, and 5	0.029 lbs/MMBtu	46.811
Number 13 blast furnace sinter screening station baghouse	0.0100 gr/dscfm	1.89
Number 2 Q-BOP north flux handling system baghouse	0.0070 gr/dscfm	1.80
Number 2 Q-BOP south flux handling system baghouse	0.0070 gr/dscfm	1.80
Number 2 Q-BOP secondary emissions baghouse	0.0100 gr/dscfm	38.57
Number 3 sinter plant S1/S2 baghouse	0.0100 gr/dscfm	1.29
TBBH boiler number 4A	0.012 lbs/MMBtu	2.831
Number 13 blast furnace casthouse baghouse	0.0090 gr/dscfm	38.57
Number 1 BOP Casbell/OB lancing baghouse	0.0070 gr/dscfm	5.10
Number 2 Q-BOP LMF number 1 hot fume exhaust baghouse	0.0040 gr/dscfm	2.91
Number 2 Q-BOP LMF number 2 hot fume exhaust baghouse	0.0040 gr/dscfm	2.91
Coke plant desulfurization facility tail gas incinerator	not applicable	0.16
Slab mill slab grinder baghouse	0.0100 gr/dscfm	2.57
EGL boiler house	0.008 lbs/MMBtu	0.289
Coke battery number 5/7 pushing emissions control baghouse	0.0060 gr/dscfm	1.17
Number 2 Q-BOP RH-degasser slag conditioning baghouse	0.0035 gr/dscfm	2.75
Coke battery number 2/3 quench tower number 1	not applicable	0

(e) The following opacity limits shall be complied with and shall take precedence over those in 326 IAC 5-1-2 when they conflict:

<u>Source</u>	<u>Opacity</u>
<b>INLAND STEEL</b>	
Electric arc furnace direct shell evacuation system baghouse	5%, 6 minute average
Electric furnace shop roof monitor	20%, 6 minute average
Electric furnace shop ladle metallurgical station baghouse	5%, 6 minute average
Number 2 basic oxygen furnace, number 10 furnace off-gas scrubber	20%, 6 minute average
Number 2 basic oxygen furnace, number 20 furnace off-gas scrubber	20%, 6 minute average
Number 2 basic oxygen furnace caster fume collection baghouse	5%, 3 minute average
Number 2 basic oxygen furnace charging isle and reladling desulfurization baghouse	5%, 3 minute average
Number 2 basic oxygen furnace flux storage and batch baghouse	5%, 3 minute average
Number 2 basic oxygen furnace ladle metallurgy station baghouse	5%, 3 minute average
Number 2 basic oxygen furnace roof monitor	20%, 3 minute average
Number 2 basic oxygen furnace secondary ventilation system scrubber	20%, 6 minute average
Number 2 basic oxygen furnace truck and ladle hopper baghouse	5%, 3 minute average
Number 2 basic oxygen furnace tundish dump baghouse	5%, 3 minute average
Number 4 basic oxygen furnace off-gas scrubber	20%, 6 minute average
Number 4 basic oxygen furnace reladling and desulfurization baghouse	5%, 3 minute average
Number 4 basic oxygen furnace roof monitor	20%, 3 minute average
Number 4 basic oxygen furnace secondary ventilation system baghouse	5%, 3 minute average
Number 4 basic oxygen furnace vacuum degassing material handling baghouse	5%, 3 minute average
Number 7 blast furnace casthouse	15%, 6 minute average
<b>LTV STEEL CORPORATION</b>	
Basic oxygen furnace ladle metallurgical station baghouse	5%, 3 minute average
Basic oxygen furnace main stack	20%, 6 minute average
Basic oxygen furnace reladling and desulfurization baghouse	5%, 3 minute average
Basic oxygen furnace shop roof monitor	20%, 3 minute average
<b>USS-Gary Works</b>	
Number 1 basic oxygen furnace iron desulfurization baghouse	5%, 3 minute average

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Number 1 basic oxygen furnace roof monitor	20%, 3 minute average
Number 1 basic oxygen process gas cleaning (two (2) units)	20%, 6 minute average
Number 2 QBOP hot metal desulfurization baghouse	5%, 3 minute average
Number 2 QBOP gas cleaning	20%, 6 minute average
Number 2 QBOP roof monitor	20%, 3 minute average
Number 2 QBOP flue handling line baghouse	5%, 3 minute average
New 2 QBOP secondary baghouse	5%, 3 minute average
Number 2 QBOP ladle metallurgy baghouse number 1	5%, 3 minute average
Number 2 QBOP ladle metallurgy baghouse number 2	5%, 3 minute average

(f) Test methods for this section shall be as follows:  
 (1) Emissions of PM<sub>10</sub> shall be measured by any of the following methods:

- (A) 40 CFR 51, Appendix M, Method 201\*.
- (B) 40 CFR 51, Appendix M, Method 201A\*.
- (C) The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR 60, Appendix A, Method 1, 1A, 2, 2A, 2C, 2D, 3, or 4\*.

(2) Emissions for TSP matter shall be measured by the following methods:

- (A) 40 CFR 60, Appendix A, Method 5, 5A, 5D, 5E, or 17\*. Method 17 may not be used when the stack gas temperature exceeds two hundred forty-eight (248) degrees (~~248~~) Fahrenheit plus or minus twenty-five (25) degrees Fahrenheit.
- (B) The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR 60, Appendix A, Method 1, 1A, 2, 2A, 2C, 2D, 3, or 4\*.

(3) Measurements of opacity shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9\*, except for those sources where a three (3) minute averaging time is required. Sources requiring a three (3) minute averaging time are subject to all parts of Method 9 except the six (6) minute averaging provision. In these cases, the opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

(4) Emissions of sulfuric acid mist shall be measured in accordance with 40 CFR 60, Appendix A, Method 8\*.

(5) Compliance with the mass emission limits for the sinter plant windbox stacks at USS Gary in subsection (d) shall be determined by the simultaneous sampling and analysis of both noncondensibles (front half) and condensibles (back half) particulate matter. The quantity of noncondensibles particulate matter in the gas stream shall be determined in accordance with the procedures specified in 40 CFR 60, Appendix A, Method 5\*. The quantity of condensible particulate matter in the gas stream shall be determined in accordance with 40 CFR 51, Appendix M, Method 202\*, with the following modifications:

(A) A heated Method 5\* out of stack filter shall be used instead of an in-stack filter.

(B) The impinger system shall consist of five (5) impingers. The first three (3) impingers shall contain one hundred (100) milliliters of deionized water, the fourth shall be empty, and the fifth shall contain silica gel.

(C) The first four (4) impingers shall be used to determine the quantity of condensible particulate emissions.

Compliance shall be achieved if the sum of the front half and the back half is less than or equal to the mass emission limit of one hundred sixty-seven and one-tenth (167.1) lbs/hr, and the front half catch is less than or equal to the mass concentration limit of sixty-five thousandths (0.065) gr/dscf in subsection (d).

(g) The installation and operation of opacity continuous emissions monitors shall be conducted according to procedures specified in 326 IAC 3. Prior to December 10, 1993, the following facilities shall have a continuous emission monitor for opacity installed and operating:

- (1) Coke battery underfire stacks at USS.
- (2) LTV: basic oxygen furnace precipitator main stack.
- (3) US Steel, Gary Works: numbers 2 and 3 precarbon building preheating and drying line exhaust gas precipitators (six (6) units). One (1) opacity continuous emission monitor shall be installed prior to December 10, 1993. The remaining five (5) opacity continuous emission monitors shall be installed prior to December 31, 1994. Based on an evaluation of the technical feasibility of operation of the first monitor on one (1) line, US Steel, Gary Works may petition for a one (1) year extension of the requirement to install the remaining five (5) monitors or for a waiver for installation and operation of the six (6) opacity continuous emission monitors. US Steel, Gary Works shall include information on the moisture content of the gases and their effect on accurate opacity measurements as part of the petition.

(h) The following combustion sources shall fire natural gas only:

<u>Source</u>	<u>Units</u>	<u>lbs/hr</u>
(1) JUPITER ALUMINUM CORPORATION		
Number 2 annealer	0.003 lbs/MMBtu	0.048
Number 3 annealer	0.003 lbs/MMBtu	0.048
Annealing furnace	0.003 lbs/MMBtu	0.040
Boiler	0.003 lbs/MMBtu	0.010
(2) SILGAN CONTAINERS MANUFACTURING CORPORATION		
Stack serving basecoat ovens (six (6) units)	0.003 lbs/MMBtu	0.210
Boiler number 4	0.003 lbs/MMBtu	0.010
Stack serving boiler numbers 1, 2, and 3	0.003 lbs/MMBtu	0.170
Stack serving Johnson space heater numbers 1 through 4	0.003 lbs/MMBtu	0.060
Stack serving litho ovens (five (5) units)	0.003 lbs/MMBtu	0.150
(3) CERESTAR USA, INCORPORATED		
Boiler number 1	0.003 lbs/MMBtu	0.288
Boiler number 2	0.003 lbs/MMBtu	0.468

South dextrin furnace number 1	0.003 lbs/MMBtu	0.023
North dextrin furnace number 2	0.003 lbs/MMBtu	0.023
(4) AMERICAN STEEL FOUNDRY-HAMMOND		
Boiler number 4-5509	0.003 lbs/MMBtu	0.030
Furnaces	0.003 lbs/MMBtu	0.16
(5) AMOCO OIL, WHITING REFINERY BP PRODUCTS NORTH AMERICA INC.		
F-100 marine docks distillate heater	0.003 lbs/MMBtu	0.020
(6) SMITH READY MIX		
Stack serving two (2) boiler units	0.003 lbs/MMBtu	0.035
(7) STATE LINE ENERGY, LLC		
Stack serving emergency backup boiler numbers 2-1 and 2-2	0.003 lbs/MMBtu	0.900
(8) E.I. DUPONT		
Power house (one (1) unit)	0.003 lbs/MMBtu	0.100
(9) GATX-GEN AMER TRANS		
Stress relief furnace	0.003 lbs/MMBtu	0.120
(10) GENERAL REFRACTORY		
Tunnel kiln	0.003 lbs/MMBtu	0.040
(11) HAMMOND GROUP, INC. (HGI)		
Stack 18-S-24	0.003 lbs/MMBtu	0.025
Stack 18-S-49	0.003 lbs/MMBtu	0.025
(12) HAMMOND GROUP, INC.-HALSTAB DIVISION		
Stack S-18	0.003 lbs/MMBtu	0.008
Stack S-19	0.003 lbs/MMBtu	0.008
(13) INLAND STEEL		
12 inch bar mill reheat furnace	0.003 lbs/MMBtu	1.090
Stack serving 21 inch bar mill reheat furnace numbers 1 and 2	0.003 lbs/MMBtu	1.31
Stack serving 76 inch hot strip mill reheat furnace numbers 1, 2, and 3	0.003 lbs/MMBtu	1.310
Stack serving 80 inch hot strip mill furnace numbers 3 and 4	0.003 lbs/MMBtu	3.980
Number 3 cold strip and numbers 5 and 6 annealing furnaces	0.003 lbs/MMBtu	0.987
Number 5 galvanizing line	0.003 lbs/MMBtu	0.44
Number 3 continuous anneal line	0.003 lbs/MMBtu	0.25
Open coil anneal	0.003 lbs/MMBtu	0.25
Plant 1 galvanizing lines	0.003 lbs/MMBtu	0.51
Normalizing line	0.003 lbs/MMBtu	0.13
(14) LTV STEEL CORPORATION		
Hot strip space heater numbers 1 through 28	0.003 lbs/MMBtu	0.250 TSP
Sheet mill number 2 portable annealing furnace numbers 1 through 23	0.003 lbs/MMBtu	1.100 TSP
Sheet mill number 2 space heater numbers 1 through 7	0.003 lbs/MMBtu	0.050 TSP
Sheet mill number 3 open coil annealing furnace numbers 1 through 3	0.003 lbs/MMBtu	0.031 TSP
Number 3 sheet mill annealing furnace numbers 1 through 7	0.003 lbs/MMBtu	0.071 TSP
Number 3 sheet mill annealing furnace numbers 1 through 11	0.003 lbs/MMBtu	0.520 TSP
Sheet mill number 2, annealing and galvanizing furnace numbers 2 through 5	0.003 lbs/MMBtu	1.280 TSP
Sheet mill number 2, CRSM boiler numbers 7 and 8	0.003 lbs/MMBtu	0.290 TSP
Number 2 cold reduced strip mill, number 2 galvanizing line, numbers 1 and 2 flame furnaces	0.003 lbs/MMBtu	0.500
Number 2 sheet mill galvanizers 1 and 2	0.003 lbs/MMBtu	0.265 TSP
(15) UNILEVER HPC, USA		
American hydrotherm boiler number 1	0.003 lbs/MMBtu	0.040
(16) NIPSCO-MITCHELL		
Number 9A gas turbine	0.003 lbs/MMBtu	0.660
(17) PRAXAIR		
Package boilers (two (2) units)	0.003 lbs/MMBtu	0.618
Plants numbers 6, 7, and 8 regenerator heaters	0.003 lbs/MMBtu	0.097
(18) UNION TANK CAR CO.		
Boiler house, north	0.003 lbs/MMBtu	0.110
Boiler house, south	0.003 lbs/MMBtu	0.110
Number 4 boiler	0.003 lbs/MMBtu	0.020
Number 8 boiler	0.003 lbs/MMBtu	0.010
North stress furnace	0.003 lbs/MMBtu	0.160
Stack serving paint oven unit numbers 1 through 5	0.003 lbs/MMBtu	0.060
South stress furnace	0.003 lbs/MMBtu	0.160



(19) U.S. GYPSUM COMPANY

Each stack serving wallboard drying furnace, stacks B4, B5, and B6	0.003 lbs/MMBtu	0.068
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(20) USS-Gary Works

Electrogalvanizing boiler	0.003 lbs/MMBtu	0.110
Number 2 coke plant boiler house, boiler number 1	0.003 lbs/MMBtu	0.385
Number 2 coke plant boiler house, boiler number 2	0.003 lbs/MMBtu	0.385
Tin mill boiler number 5	0.003 lbs/MMBtu	0.480
Tin mill boiler number 1	0.003 lbs/MMBtu	0.240
Tin mill boiler number 2	0.003 lbs/MMBtu	0.240
Stack serving tin mill boiler numbers 3 and 4	0.003 lbs/MMBtu	0.830
160/210 inch plate mill, car bottom heat treating furnace	0.003 lbs/MMBtu	0.070
160/210 inch plate mill, car bottom normalizing furnace	0.003 lbs/MMBtu	0.070
160/210 inch plate mill, keep hot pits	0.003 lbs/MMBtu	0.090

(i) (Reserved)

(j) (Reserved)

(k) This subsection lists site-specific control requirements. For any facility with a compliance date after December 10, 1993, the company shall submit a schedule for meeting the final compliance date containing milestones for purchase and installation of the equipment and for the operational changes required to assure compliance with the applicable standard prior to the final compliance date. The schedule shall be submitted to the department and to U.S. EPA prior to December 10, 1993. A violation of any milestone in the submitted schedule constitutes a violation of this rule. The sources listed shall meet the requirements as follows:

- (1) The following requirements for Cerestar USA, Incorporated:
  - (A) Starch dryer number 1 shall be permanently shut down by December 31, 1993.
  - (B) Starch dryer number 2 stack height shall be increased from eighteen and three-tenths (18.3) meters to thirty (30) meters by December 10, 1993.
  - (C) Dextrin manufacturing systems 1 through 7 shall be permanently shut down by December 31, 1993.
  - (D) After December 10, 1993, Cerestar USA, Incorporated shall achieve compliance with the respective limits in subsection (d). The following mass emission limits shall be applicable until December 10, 1993:

<u>Process</u>	<u>Units</u>	<u>Emission Limit</u>
Each stack serving dextrin manufacturing equipment systems numbers 1 through 7	1.000 lbs/ton	0.50 lbs/hr
Starch flash feed dryer number 1 scrubber	0.086 lbs/ton	8.69 TSP

- (2) American Steel Foundry-Hammond. The PM<sub>10</sub> mass emission limit in subsection (d) for coil spring grinder numbers 3-0244, 3-0386, 3-0389, 3-0247, 3-0385, 3-0295, and 3-0233 shall be complied with no later than December 31, 1993, and shall be maintained thereafter. The source shall either improve the efficiency of the existing control equipment or replace the existing control equipment with higher efficiency control equipment to comply with emission limits specified in subsection (d).
- (3) State Line Energy, LLC. Units 3 and 4 shall comply with:
  - (A) a thirty percent (30%), six (6) minute average opacity limit until December 31, 1992;
  - (B) a twenty-five percent (25%), six (6) minute average opacity limit from January 1, 1993, to December 31, 1993; and

(C) a twenty percent (20%), six (6) minute average opacity limit after December 31, 1993.

(4) Hammond Group, Inc. (HGI)-Halox plant. The stack heights of stacks 17-S-25 and 17-S-40 shall be raised to twenty-one and three-tenths (21.3) meters above grade by December 10, 1993.

(5) The following for Inland Steel:

(A) Number 2 BOF facility roof monitor. The twenty percent (20%), three (3) minute average opacity standard in subsection (e) shall be achieved no later than December 31, 1994, and shall be maintained thereafter. Prior to December 31, 1994, the opacity standard shall be the thirty percent (30%), six (6) minute average. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9\*, except that the three (3) minute, twenty percent (20%) opacity standard shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

(B) Numbers 8 and 11 coke batteries. Operation of the number 8 coke battery and its underfire stack and number 11 coke battery and its associated quench tower, underfire stack, and preheater stacks shall be permanently discontinued before December 31, 1992.

(C) Number 10 coke battery. After the shutdown of the number 8 coke battery, the electrostatic precipitator associated with the number 8 coke battery shall be connected to the number 10 coke battery prior to December 31, 1992.

(D) Numbers 6, 7, 9, and 10 coke batteries. These coke batteries and associated quench towers and underfire stacks shall not operate after December 31, 1994. Prior to December 31, 1994, these coke batteries shall meet the requirement of section 10.2 of this rule with the following exceptions:

- (i) There shall be no visible emissions from more than ten percent (10%) of the standpipes on operating ovens on a battery.
- (ii) Visible emissions shall not exceed twenty percent (20%) averaged over six (6) consecutive observations during any pushing operation.
- (iii) Mass emissions from the coke battery underfire stacks shall not exceed fifty-thousandths (0.050) gr/dscf.

(E) Number 4 BOF facility roof monitor. The twenty percent (20%), three (3) minute average opacity standard in subsection (e) shall be achieved no later than December 31, 1994, and shall be maintained thereafter. Prior to December 31, 1994, the opacity standard shall be the twenty-five percent (25%), six (6) minute average.

(F) Number 7 blast furnace casthouse. Tapping emissions from the number 7 blast furnace casthouse shall be controlled by a hood vented to a baghouse on and after December 1, 1992. Canopy

hoods shall be installed above each of the four (4) furnace tap holes. The hoods shall be ducted to a new three hundred seventy thousand (370,000) actual cubic feet per minute minimum design flow rate baghouse. Each hood shall be located just above the casthouse crane and extend via vertical sheeting to the casthouse roof. The system shall provide a minimum of one hundred eighty-five thousand (185,000) actual cubic feet per minute of air flow (fume capture) to each hood, when the corresponding tap hole is being drilled or plugged.

(G) Number 2 bloom mill soaking pits. The soaking pits shall not operate after December 31, 1992.

(H) Prior to December 31, 1994, Inland Steel shall comply with a thirty percent (30%), six (6) minute average opacity limit for the electric arc furnace roof monitor. On and after December 31, 1994, Inland Steel shall comply with the roof monitor opacity limit specified in subsection (e). Prior to December 31, 1994, Inland Steel shall do the following:

(i) Perform tests according to procedures developed in consultation with the department to establish process and control equipment operating procedures and to establish control system fan motor ampere and damper position or volumetric flow rates through each separately ducted hood and/or duct used to capture emissions during the electric arc furnace charging, tapping, and refining process.

(ii) Install the required monitoring equipment in consultation with the department regarding its accuracy and precision position.

(iii) Record the start time and duration of charging, tapping, and refining of each heat.

(I) After December 31, 1994, the sources shall comply with the respective limits contained in subsection (d). The following mass emission limits will be applicable until December 31, 1994:

Inland Steel Processes	Emission Limit (Units)	Emission Limit (lbs/hr)
Number 6 coke battery underfire stack	0.271 lbs/ton coal	9.840
Number 7 coke battery underfire stack	0.267 lbs/ton coal	15.580
Number 9 coke battery underfire stack	0.406 lbs/ton coal	19.180
Number 10 coke battery underfire stack	0.371 lbs/ton coal	27.81
Stack serving 21 inch bar mill reheat furnace numbers 1 and 2	0.29 lbs/MMBtu	12.95
Number 4 slabber soaking pit numbers 1 through 18 collective	0.0 lbs/MMBtu	0.0
Number 4 slabber soaking pit numbers 19 through 45 collective	0.031 lbs/MMBtu	9.190
Number 3AC station boiler numbers 301 through 304	0.023 lbs/MMBtu	20.45
Number 3AC station boiler number 305	0.023 lbs/MMBtu	6.82

(6) The following requirements for LTV Steel Corporation:

(A) Basic oxygen furnace facility roof monitor. The twenty percent (20%), three (3) minute average opacity standard in subsection (e) shall be achieved no later than December 10, 1993, and shall be maintained thereafter. Prior to December 10, 1993, the opacity standard shall be twenty percent (20%), except for one (1) three (3) minute average per hour.

(B) Number 4 blast furnace. Compliance with the opacity limit shall be achieved no later than February 1, 1994, and shall be

maintained thereafter. Also, control equipment capable of capturing and collecting emissions generated at the east and west tilting runner spouts and tap holes shall be installed and operational by February 1, 1994.

(7) NIPSCO-Mitchell. Units 5 and 6 shall comply with the following:

(A) Thirty percent (30%), six (6) minute average opacity limit until December 31, 1992.

(B) Twenty-five percent (25%), six (6) minute average opacity limit from January 1, 1993, to December 10, 1993.

(C) Twenty percent (20%), six (6) minute average opacity limit after December 10, 1993.

(8) The following requirements for USS-Gary Works:

(A) Numbers 15 and 16 coke batteries. The coke batteries and all associated operations shall not operate after the effective date of this section.

(B) Number 13 blast furnace casthouse roof monitor. The twenty percent (20%), six (6) minute average opacity standard shall be achieved no later than December 31, 1994, and shall be maintained thereafter. Prior to December 31, 1994, the blast furnace casthouse shall comply with a thirty percent (30%) opacity, six (6) minute rolling average standard.

(C) Number 1 basic oxygen furnace facility roof monitor. The twenty percent (20%), three (3) minute average opacity standard in subsection (e) shall be achieved no later than December 31, 1996, and shall be maintained thereafter. Prior to December 31, 1996, the following opacity standards shall apply:

(i) Prior to January 1, 1995, the instantaneous opacity shall not exceed thirty percent (30%) opacity except for an aggregate of six (6) minutes per hour. Twenty-four (24) instantaneous opacity readings greater than thirty percent (30%) within any sixty (60) minute period shall be considered a six (6) minute aggregate.

(ii) For the period of January 1, 1995, through December 31, 1995, the instantaneous opacity shall not exceed twenty-five percent (25%) opacity, except for an aggregate of six (6) minutes per hour.

(iii) For the period of January 1, 1996, through December 30, 1996, the instantaneous opacity shall not exceed twenty-five percent (25%) opacity, except for an aggregate of five (5) minutes per hour. Twenty (20) instantaneous opacity readings greater than thirty percent (30%) within any sixty (60) minute period shall be considered a five (5) minute aggregate.

(D) Number 2 QBOP facility roof monitor. The twenty percent (20%), three (3) minute average opacity standard in subsection (e) shall be achieved no later than December 31, 1994, and shall be maintained thereafter. Prior to December 31, 1994, the instantaneous opacity shall not exceed thirty percent (30%) opacity except for an aggregate of eight (8) minutes per hour. Thirty-two (32) instantaneous opacity readings greater than thirty percent (30%) within any sixty (60) minute period shall be considered an eight (8) minute aggregate.

(E) Number 2 coke plant boilers. Only four (4) of the number 2 coke plant boilers may operate using coal or coke oven gas at the same time. If more than four (4) boilers are in operation, all but four (4) shall use natural gas.

(F) Eighty-four (84) inch hot strip mill. Actual heat input derived from coke oven gas and fuel oil shall not exceed a total of four hundred seventy-seven million (477,000,000) British thermal units per hour for waste heat boiler number 1 and furnace numbers 1 and 2 combined and a total of five hundred seven million (507,000,000) British thermal units per hour for waste heat boiler 2 and furnaces 3 and 4 combined. The remainder of the actual heat

input shall be obtained by burning natural gas. A total actual heat input shall not exceed four hundred forty million (440,000,000) British thermal units per hour for each furnace, one hundred seventy million (170,000,000) British thermal units per hour for waste heat boiler number 1, and two hundred million (200,000,000) British thermal units per hour for waste heat boiler number 2.

(G) Only two (2) of the three (3) sinter lines shall operate at any one (1) time. For each line, USS-Gary Works shall maintain the following records in regard to the sinter plant operation:

- (i) Startup and shutdown time.
- (ii) Average hourly production rate.
- (iii) The cause of any malfunction and the correction taken.

(H) Number 2 coke plant boiler house boilers numbers 4, 5, and 6. A ninety (90) day written notice shall be given to the department and U.S. EPA in the event of switching fuels from gas to coal. In addition, continuous opacity emission monitors must be installed prior to the fuel switch.

(I) Beach iron dumping and process vessel maintenance activities subject to subsection (p)(3)(F)(i) and (p)(3)(F)(ii) shall comply with the applicable twenty percent (20%) opacity limitation no later than December 31, 1994. The schedule for compliance submitted by December 10, 1993, shall establish milestones that achieve final compliance as soon as practical, but no later than December 31, 1994.

(J) Number 5 quench tower will comply with the ninety-five percent (95%) baffle requirement under section 10.2(c)(7)(F) of this rule no later than December 10, 1993.

(l) The continuous compliance plan (CCP) for sources listed in subdivisions (1) through (21) shall contain information on the facilities included in subsections (d) and (e). The following sources shall submit a CCP to the department by December 10, 1993:

- (1) American Steel Foundries-East Chicago.
- (2) American Steel Foundry-Hammond.
- (3) ~~Amoco Oil Company~~ **BP Products North America Inc.**
- (4) Bucko Construction.
- (5) Cerestar USA, Incorporated.
- (6) Globe Industries.
- (7) Hammond Group, Inc. (HGI).
- (8) Harbison Walker Refractories, Hammond Works.
- (9) Inland Steel.
- (10) LTV Steel Corporation.
- (11) Marblehead Lime Company.
- (12) Marport Smelting.
- (13) National Recovery Systems.
- (14) NIPSCO-Mitchell.
- (15) Reed Minerals.
- (16) Rhodia, Inc.
- (17) State Line Energy, LLC.
- (18) Unilever HPC, USA.
- (19) U.S. Gypsum Company.
- (20) USS-Gary Works.

(21) A CCP shall also be submitted by any source in Lake County for facilities that meet the following conditions:

(A) Boilers with heat input capacity equal to or greater than twenty-five million (25,000,000) British thermal units per hour, singly or in combination, that vent through a single stack. Facilities, including boilers and reheat furnaces, configured to burn only natural gas, blast furnace gas, or coke oven gas, or a combination of these gases, are exempt.

(B) Facilities that perform manufacturing operations in a building

or structure such that the total uncontrolled PM<sub>10</sub> emissions from all such operations amount to ten (10) tons per year or more and that could potentially escape into the atmosphere through roof vents and other openings. The uncontrolled PM<sub>10</sub> emissions shall be estimated with AP-42, "Compilation of Air Pollutant Emission Factors, Volume I, (Stationary Point and Area Sources)", Fifth Edition, January 1995\*, Supplements A through G, December 2000\* emission factors or other documentable emission factors acceptable to the commissioner and U.S. EPA.

(C) Each facility, not otherwise required to submit a CCP in accordance with this subsection, with uncontrolled PM<sub>10</sub> or TSP emissions that may exceed one hundred (100) tons per year based on eight thousand seven hundred sixty (8,760) hours of operation and AP-42 emission factors or other documentable emission factors acceptable to the commissioner and U.S. EPA.

(m) The CCP shall contain, for the facilities specified in subsection (l), documentation of operation and maintenance practices of process operations and any particulate matter control equipment existing or required to be installed, replaced, or improved by subsection (k) that are essential to maintaining compliance with the mass and opacity limits specified in subsections (d) and (e) and 326 IAC 5-1.

(n) The CCP shall include the following:

- (1) A list of the processes and facilities at the source.
- (2) A list of the particulate matter control equipment associated with the processes and facilities listed in subsection (l).
- (3) The process operating parameters critical to continuous compliance with the applicable PM<sub>10</sub> or TSP mass and opacity limits, including applicable specific requirements listed in subsection (p).
- (4) The particulate matter control equipment operating parameters critical to continuous compliance with the applicable PM<sub>10</sub> or TSP mass and opacity including applicable requirements listed in subsection (q).
- (5) The specific monitoring, recording, and record keeping procedures for process and control equipment for each facility in the CCP specified in subdivisions (1) and (2).
- (6) The procedure used to assure that adequate exhaust ventilation is maintained through each duct at facilities where emissions are captured by a collection hood and transported to a control device.

(o) A CCP for a source to which subsection (k) applies shall contain a schedule for complying with the requirements of subsection (k). The schedule shall list specific compliance dates for the following actions:

- (1) Submittal of plans.
- (2) Start of construction.
- (3) Completion of construction.
- (4) Achieving compliance.
- (5) Performing compliance tests.
- (6) Submitting compliance test results.

(p) A source or facility to which subsection (l) applies and which belongs to any source category listed in this subsection shall include the following information or applicable procedures, or commit to the following actions, in its CCP:

- (1) For lime plants, monitor opacity at the kilns and control system vents during normal operation of the kiln with a continuous emission monitor or through self-monitoring of opacity. 40 CFR 60, Appendix A, Method 9\* should be used to determine opacity if the facility is controlled by a positive pressure fabric filter.
- (2) For petroleum refineries, continuously monitor opacity of exhaust gases and monitor the coke burn-off rate in pounds per hour from fluid catalytic cracking unit catalyst regenerators.

(3) Steel mill CCPs shall include, as a minimum, the following:

(A) Basic oxygen process (BOP, BOF, QBOP), including the following:

(i) Describe the capture and control devices used to control particulate emissions from each phase of the steel production cycle, including, but not limited to, the furnace, hot metal transfer, hot metal desulfurization, and kish removal. The description shall include the locations within the facility of these operations in relation to capture hoods, control devices, roof vents, and other building openings.

(ii) Describe any fume suppression system, including, but not limited to, the process or emission point being controlled, the location within the facility, the inert gas or steam application rate, and the monitoring method. As used in this item, "fume suppression system" means the equipment comprising any system used to inhibit the generation of emissions from steelmaking facilities with an inert gas, flame, or steam blanket applied to the surface of molten iron or steel.

(iii) Describe the procedure for recording furnace charging and tapping time, amount of throughput, and amount of steel produced.

(iv) Describe the off-gas system leak detection and repair record keeping practices.

(v) Describe the procedures used to minimize dirt and debris accumulation on the facility floor.

(vi) Describe practices that reduce PM<sub>10</sub> and TSP emissions escaping the primary or secondary hood during scrap charging and hot metal charging tapping steel and dumping slag.

(vii) At least monthly, inspect the operational status of the following elements of the capture system and maintain records of the inspections and any repairs:

- (AA) Pressure sensors.
- (BB) Dampers.
- (CC) Damper switches.
- (DD) The hood and ductwork for the presence of holes.
- (EE) Ductwork for accumulation of dust.
- (FF) Fans for erosion.

(B) Electric arc furnace, including the following:

(i) List the furnace operating sequences to be followed in case of multivessel operation. Describe the capture and control devices used to control particulate emissions in each phase of the steel production cycle, including, but not limited to, exhaust rate and dampers, blast gates, instrumentation operation, and control. Include a drawing that shows:

- (AA) the location of the furnace within the facility in relation to capture hoods and control devices, roof vents, and other building openings; and
- (BB) the location of other processes within the facility that have potential to generate emissions, including, but not limited to, casting and ladle repair.

(ii) Describe the procedure for recording the following:

- (AA) Time of furnace charging, furnace melting, and furnace refining.
- (BB) Tapping start and stop times.
- (CC) Charge weight for each heat.
- (DD) Tap weight for each heat.

(iii) At least monthly, inspect the operational status of the following elements of the capture system and maintain records of the inspections and any repairs:

- (AA) Pressure sensors.
- (BB) Dampers.
- (CC) Damper switches.

(DD) Hood and ductwork for the presence of holes.

(EE) Ductwork for accumulation of dust.

(FF) Fans for erosion.

(iv) Describe procedures used to minimize dirt and debris accumulation on the facility floor.

(v) Once per heat, either check and record the control system fan motor ampere and damper position or monitor flow rate through each separately ducted hood and/or duct used to capture emissions from the electric arc furnace operation.

(vi) Take visible emission readings of the direct shell evacuation system and the roof monitor at least once a day. The readings shall be taken during one (1) single steel production cycle and will be concurrent with the observations in subsection (k)(5)(H)(iii). The opacity observations shall be taken according to 40 CFR 60, Appendix A, Method 9\* and consist of at least one (1) six (6) minute observation each during charging and tapping and three (3) six (6) minute observations during melting and refining.

(vii) Report to the department on a quarterly basis control system fan motor amperage values that exceed fifteen percent (15%) of the value or operation at volumetric flow rates lower than those established during the performance test in subsection (k)(5)(H)(i). Operation above these values may be considered as unacceptable operation of the electric arc furnace equipment and the emissions capture and control system by the commissioner. Unless alternative values are established according to the procedures prescribed in subsection (l).

(viii) Keep a record of any process and control equipment upsets, malfunctions, or activities within the electric arc furnace facility that may have resulted in excessive emissions. The records shall consist of the nature of event, time, and duration.

(C) Iron production that includes a blast furnace shall comply with the following:

(i) Describe procedures, including, but not limited to, frequency, for inspection of the following elements of a capture system and maintain records of the inspections, maintenance, and any repairs made:

- (AA) Pressure sensors.
- (BB) Dampers.
- (CC) Damper switches.
- (DD) Hood and ductwork for the presence of holes.

(ii) Describe procedures used to minimize dirt and debris accumulation on the facility floor.

(iii) Describe any fume suppression system, including, including, but not limited to, the process or emission point being controlled, the location, and the inert gas or steam application rate and the monitoring method. Fume suppression system means the equipment comprising any system used to inhibit the generation of emissions from steelmaking facilities with an inert gas, flame, or steam blanket applied to the surface of molten iron or steel.

(iv) Describe the record keeping for the following elements of the iron production cycle:

- (AA) Time of hole drilling.
- (BB) Time of tapping.
- (CC) Time of hole plugging.

(v) Describe the blast furnace inspection, repair, and maintenance schedule for the following elements:

- (AA) Tuyres.
- (BB) Bleeder valves.
- (CC) Large and small bells.
- (DD) Uptakes and downcomers (to minimize backdrafting).
- (EE) Standby devices.

(vi) Describe the procedures used to inspect and operate the blast furnace gas cleaning equipment, including, but not limited to, dust catchers and scrubbing equipment to assure operation within design parameters.

(D) Sinter production shall comply with the following:

(i) Describe routine startup and shutdown procedures and other work practices which are followed to reduce emissions and equipment malfunctions.

(ii) Describe procedures for inspection of equipment to identify areas which may affect particulate emissions, including, but not limited to, the following:

- (AA) Points of wear.
- (BB) Distorted grate bars.
- (CC) Leaking machine seals.
- (DD) Holes in ducts.
- (EE) Holes in flapper valves.

(iii) Describe procedures for monitoring mechanical and electrical inspection records.

(iv) Describe procedures used to minimize dirt and debris accumulation on the facility floor.

(v) Describe procedures for monitoring burden parameters, including, but not limited to, base to acid ratio and hydrocarbon content.

(vi) Describe the routine for plant operation during equipment failure, including, but not limited to, screening station failure.

(vii) At least monthly, inspect the operational status of the following elements of the capture system and maintain records of the inspections and any repairs:

- (AA) Pressure sensors.
- (BB) Dampers.
- (CC) Damper switches.
- (DD) Hood and ductwork for the presence of holes.
- (EE) Ductwork for accumulation of dust.
- (FF) Fans for erosion.

(E) Coke production shall comply with the following:

(i) Describe operating and maintenance practices used to minimize emissions from charging doors, charge port lids, offtakes, standpipes, gooseneck caps and gas collector mains, pushing, underfire stacks, and quenching, including, but not limited to, quench water dissolved solids control. The documentation shall include the following operating practices:

- (AA) Use of jumper pipe during charging.
- (BB) Procedure for worker's coordination, training, and communication.
- (CC) Luting material used.
- (DD) Periodic engineering evaluations to determine improvements needed.
- (EE) Aspiration practices during charging, including, but not limited to, aspiration rate and adjustment.

(ii) Describe the routinely available inventory of spare parts and equipment, including, but not limited to, luting compounds, doors, and mobile scrubber cars.

(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:

(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\*. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

(ii) Maintenance of process vessels, **for example, pugh ladles,**

shall be performed in enclosed structures. The visible emissions from such structures shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\*. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

(iii) Emissions from all steel scrap burning or cutting and oxygen lancing operations shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\*. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

(G) Visible emission evaluation plans shall comply with the following:

(i) Within sixty (60) days of the effective date of this section, each steel mill shall submit a plan to conduct visible emissions evaluations per the approved test method or procedures to determine compliance with the applicable opacity standard. The plan shall specify the frequency of visible emissions evaluations at the operations included in clauses (A) through (F). The plan shall include charging, pushing, lids and offtakes, doors, standpipes, and gas collector mains at coke production operations and lime plants.

(ii) If the plan specifies that the duration of readings is less than one (1) hour per day at each facility, then the plan shall include the basis for less frequent evaluations.

(iii) The department shall disapprove the plan if it does not include all facilities or if the proposed duration and frequency will not provide for a reasonable assessment of compliance.

(iv) Upon approval of a steel mill's plan by the department, the visible emissions evaluations shall commence and the data submitted to the department within one (1) month of the end of the calendar quarter.

(v) The plan may be revised with department approval at any time.

(4) Fuel combustion boilers, as described in subsection (l)(26)(A), shall comply as follows:

(A) The requirements of this subdivision shall not relax the fuel monitoring and reporting requirements of 326 IAC 7-1.1-1 for the sources this section applies to.

(B) Affected sources shall maintain records of the following information:

- (i) Operational status of each facility for each day.
- (ii) The daily measurements for each facility of the type of fuel used, amount of each type of fuel used, and heat content of each type of fuel used.
- (iii) The TSP or PM<sub>10</sub> emission factors for each type of fuel to be used as estimated by the AP-42 or stack test method.
- (iv) The method used to monitor the fuel amount and heat content in addition to the frequency.
- (v) The control efficiency of the particulate control device and the method of determination.
- (vi) Average daily PM<sub>10</sub> emissions (or TSP if applicable) for each facility, expressed in pounds per million British thermal units.

(C) The following guidance shall be used to estimate emissions:

- (i) For heat content, AP-42, Volume 1, Appendix A, Table A-3, "Typical Parameters of Various Fuels" Fifth Edition, January 1995\*, Supplements A through G, December 2000\*.
- (ii) For emission factors (TSP or PM<sub>10</sub>), EPA 450/4-90-003, "AIRS Facility Subsystem Source Classification Codes and Emission Factors Listing for Criteria Air Pollutants"\*\*\*.

(iii) For control equipment efficiency, manufacturer's warranty or as determined by source.

(iv) Sources may substitute other site-specific values for the values as indicated if they can be shown to be acceptable to the department.

(q) This subsection concerns particulate matter control equipment operation and maintenance requirements. A CCP shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:

- (1) Startup, shutdown, and emergency shutdown procedures.
- (2) Sources shall notify the department fifteen (15) days in advance of startup of either new control equipment or control equipment to which major modifications have been made.
- (3) Manufacturer's recommended inspection procedures, preventive and corrective maintenance procedures, and safety devices and procedures, such as sensors, alarm systems, and bypass systems. If manufacturer's recommendations are not available, procedures shall be developed by the source.
- (4) Contents of the operator's training program and the frequency with which the training is held.
- (5) A list of spare parts available at the facility.
- (6) A list of control equipment safety devices, for example, high temperature sensors and alarm systems, exhaust gas stream bypass system, or safety interlock system.
- (7) Monitoring and recording devices and/or instruments to monitor and record control equipment operating parameters specified in subsection (n)(4).

(r) Particulate matter control equipment operation, recording, and inspection procedure requirements shall be as follows:

(1) A CCP for a facility controlled with a baghouse shall include the recording, inspection, and maintenance procedures to be consistent with the requirements of subsection (m), including, but not limited to, the following:

- (A) Operating parameters, including, but not limited to, the following:
  - (i) Pressure drop across the baghouse.
  - (ii) Gas flow rate at baghouse inlet.
  - (iii) Gas temperatures at inlet.

A CCP shall identify the monitors and instrumentation, and their location, accuracy, precision, and calibration frequency. A CCP shall also include a description of any visible emission evaluation program.

(B) Baghouse cleaning system. A complete description of the cleaning system, including, but not limited to, such information as intensity, duration, frequency, and method of activation.

(C) Baghouse inspection and maintenance schedule. The inspection schedule logs or records shall be available for inspection by the department for up to one (1) year after the date of inspection. The inspection shall include the activities and frequency of the activities. A source may request an alternative schedule based on manufacturer's recommendations or alternatives documented by the company. The revised schedule must be approved by the department. Inspections shall include the following:

- (i) Daily inspections shall include the following:
  - (AA) Pressure drop.
  - (BB) Fan amperage.
  - (CC) Cleaning cycle.
  - (DD) Compressed air on pulse jet baghouses for values outside of the operating ranges.

(EE) Dust discharge equipment for proper operation.

(FF) General check for abnormal audible and visual conditions.

(ii) Weekly inspections of the following:

- (AA) Moving parts on discharge system.
- (BB) Bypass and isolation damper operation.
- (CC) Bag tension.
- (DD) Compressed air lines, oilers, and filters.
- (EE) Manometer lines.
- (FF) Temperature indicating equipment.
- (GG) Bag cleaning sequence.
- (HH) Drive components on fans.

(iii) Monthly inspections of the following:

- (AA) Bag seating condition.
- (BB) Moving parts on shaker baghouses.
- (CC) Fan corrosion and blade wear.
- (DD) Hoses and clamps.
- (EE) Bags for leaks and holes.
- (FF) Bag housing for corrosion.

(iv) Quarterly inspections of the following:

- (AA) Bags.
- (BB) Ducts for dust build-up.
- (CC) Damper valves for proper setting.
- (DD) Door gaskets.
- (EE) Baffle plate for wear.

(v) Annual inspection of the following:

- (AA) Welds and bolts.
- (BB) Hoppers for wear.
- (CC) Cleaning parts for wear.

(2) A CCP for a facility controlled by an electrostatic precipitator (ESP) shall include recording, inspection, and maintenance procedures to be consistent with the requirements of subsection (m), including, but not limited to, the following:

(A) Operating parameters, including, but not limited to, the following:

- (i) Gas flow rate.
- (ii) Temperature.
- (iii) Type and rate of gas conditioning agents used for resistivity control or resistivity measurements.
- (iv) Power input at each section of the ESP. A CCP shall identify monitors and instrumentation and specify location, accuracy, precision, and calibration frequency. A CCP shall also include a description of any visible emissions evaluation program.

(B) ESP inspection and maintenance schedule. The inspection schedule logs or records shall be available for inspection by the department for up to one (1) year after the date of inspection. The inspection shall include the activities and frequency of the activities. A source may request an alternative schedule based on manufacturer's recommendations or alternatives documented by the company. The revised schedule shall be approved by the department. Inspections shall include the following:

- (i) Daily inspection of the following:
  - (AA) Fan amperage.
  - (BB) Temperature.
  - (CC) Gas conditioning agent flow rate or resistivity.
  - (DD) Electrical readings for values outside the operating range.
  - (EE) Hoppers and dust discharge system for proper operation.
  - (FF) Transformer-rectifier enclosures and bus ducts for abnormal arcing.

Corrective actions taken, if any, shall be recorded.

(ii) Weekly inspection of the following or as per manufacturer's recommendations:

- (AA) Rapper operation.
- (BB) Control set interiors.

(iii) Monthly inspection of the following:

- (AA) Fans for noise and vibration.
- (BB) Hopper heaters.
- (CC) Hopper level alarm operation.

(iv) Quarterly inspection of the following:

- (AA) Check rapper and vibrator switch contacts.
- (BB) Access door dog bolt and hinges.
- (CC) Interlock covers.
- (DD) Test connectors.
- (EE) Exterior for visual signs of deterioration.
- (FF) Abnormal vibration, noise, and leaks.

(v) Semiannual inspection of the following, or as per manufacturer's recommendations:

- (AA) T-R liquid and surge arrestor spark gap.
- (BB) Conduct internal inspection.
- (CC) Top housing or insulator compartment and all electrical insulating surfaces, and correct any defective alignment.

(vi) Annual inspection of the following:

- (AA) Tightness of all electrical connections.
- (BB) Operation of switchgear.
- (CC) Rapper insulator connections.
- (DD) Observe and record areas of corrosion.

(3) A CCP for a facility controlled by a scrubber shall include the recording, inspection, and maintenance procedures to be consistent with the objectives of subsection (m), including, but not limited to, the following:

(A) Operating parameters, including, but not limited to, the following:

- (i) Gas flow rate.
- (ii) Inlet and outlet temperatures of gas to and from scrubber.
- (iii) Liquid flow rate to scrubber.
- (iv) Pressure drop across scrubber.
- (v) pH of liquid to scrubber.
- (vi) Fan and pump currents.

A CCP shall specify the location, accuracy, precision, and calibration frequency of monitors and instrumentation.

(B) Scrubber inspection and maintenance schedule. The inspection schedule logs or records shall be available for inspection by the department for up to one (1) year after the date of inspection. The inspection shall include the activities and frequency of the activities. A source may request an alternative schedule based on manufacturer's recommendations or alternatives documented by the company. The revised schedule shall be approved by the department. Inspections shall include the following:

- (i) Daily inspection of the following:
  - (AA) Scrubbing liquid flow rates to scrubber.
  - (BB) Pressure drop across scrubber.
  - (CC) Fan and pump amperages for values outside the operating range.

Corrective actions taken shall be recorded.

(ii) Monthly inspection of the following:

- (AA) Seals for abrasion.
- (BB) Corrosion and leaks.
- (CC) Fans for abrasion, corrosion, and solids build-up.
- (DD) Pipes for abrasion, corrosion, and plugging.
- (EE) Throat wear in the venturi scrubber.
- (FF) Sensors, alarm systems, and bypass devices for proper operation.

(GG) Entrainment separator for blockage.

(HH) Spray nozzles for plugging or excessive wear.

(s) The department shall review the CCP. The department may at any time request, in writing, any of the following:

- (1) A CCP revised to include additional documentation or practices as needed to allow the department to verify that operation and maintenance practices critical to continuous compliance with the applicable mass and opacity limits are being followed.
- (2) A compliance test conducted with the compliance test methods specified in this section if the department determines that the procedures specified in the CCP are not being followed or are inadequate to assure continuous compliance. The compliance test may consist of a series of opacity measurements of frequency and duration specified by the department or a stack test. The department may request that information be collected during the test to determine proper operation and maintenance procedures needed to assure continuous compliance with applicable mass and opacity limits.

(t) The source shall respond, in writing, within thirty (30) days of a request per subsection (s). The source shall either provide an expeditious schedule, not to exceed sixty (60) days, for providing the information requested by the department or petition the department for an alternative to the request. A schedule for completion of an opacity compliance test shall not exceed thirty (30) days from the department's request. A source may petition the department for an alternative schedule based on practical problems in meeting the request.

(u) The source shall update the CCP, as needed, retain a copy of any changes and updates to the CCP on the property, and make the updated CCP available for inspection by the department. The source shall submit the updated CCP, if required, to the department within thirty (30) days of the update.

(v) Failure to submit a CCP, maintain all information required by the CCP on plant property, or submit a required update to a CCP is a violation of this section. Failure to respond to a request by the department under subsection (s) is a violation of this section. The department may notify a source in writing of noncompliance with an action or procedure specified within a CCP and require that the source conduct a compliance test. If the compliance test demonstrates noncompliance with the applicable particulate matter or opacity limit, **both** the findings of noncompliance of both the CCP and the compliance test shall be considered as violations of the applicable mass or opacity limit. A violation of an applicable particulate matter or opacity limit of this section, based either on a compliance test performed by the source or by observations or tests conducted by the department, is a violation of this section.

\*The following are incorporated by reference: 40 CFR 51, Appendix M, Methods 201, 201A, and 202; 40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, 4, 5, 5A, 5D, 5E, 8, 9, 17, and AP-42, including supplements A through G. Copies are available from the Government Printing Office, 732 North Capitol Avenue NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204.

\*\*EPA 450/4-90-003, "AIRS Facility Subsystem Source Classification Codes and Emission Factors Listing for Criteria Air Pollutants" is incorporated by reference and is available from U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, North

Carolina 27711 or the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 6-1-10.1; filed May 12, 1993, 11:30 a.m.: 16 IR 2368; filed Mar 2, 1998, 8:30 a.m.: 21 IR 2354; filed May 13, 1999, 12:00 p.m.: 22 IR 3047; filed Dec 14, 2000, 5:07 p.m.: 24 IR 1308; errata filed May 1, 2001, 3:24 p.m.: 24 IR 2709; filed Nov 8, 2001, 2:02 p.m.: 25 IR 716*)

SECTION 2. 326 IAC 6-1-10.2 IS AMENDED TO READ AS FOLLOWS:

**326 IAC 6-1-10.2 Lake County PM<sub>10</sub> coke battery emission requirements**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11  
**Affected:** IC 13-15; IC 13-17

Sec. 10.2. (a) The provisions of this section shall apply to those sources located in Lake County which include a coke battery.

(b) The following definitions shall apply to this section:

- 326 IAC 1-2-10 "Charging" definition
- 326 IAC 1-2-11 "Charge port" definition
- 326 IAC 1-2-16 "Coke oven battery" definition
- 326 IAC 1-2-17 "Coke oven topside" definition
- 326 IAC 1-2-18 "Coke-side" definition
- 326 IAC 1-2-31 "Gas collector main" definition
- 326 IAC 1-2-32.1 "Gooseneck cap" definition
- 326 IAC 1-2-35 "Larry car" definition
- 326 IAC 1-2-34.1 "Jumper pipe" definition
- 326 IAC 1-2-49 "Offtake piping" definition
- 326 IAC 1-2-50 "Oven door" definition
- 326 IAC 1-2-60 "Pushing" definition
- 326 IAC 1-2-61 "Push-side" definition
- 326 IAC 1-2-62.1 "Quench car" definition
- 326 IAC 1-2-63 "Quenching" definition
- 326 IAC 1-2-63.1 "Quench reservoir" definition
- 326 IAC 1-2-63.2 "Quench tower" definition
- 326 IAC 1-2-77 "Standpipe lid" definition
- 326 IAC 1-2-87 "Underfire" definition.

(c) With the exceptions noted in this subsection, the coke batteries in Lake County shall comply with the following emission limits by December 10, 1993:

- (1) Single-pass cap for oven door emissions. No visible emissions shall be permitted from more than ten percent (10%) of the observed coke oven doors on any coke oven battery. The number of coke-side doors and push-side doors shall be counted in determining compliance with this emission limit. Doors of ovens which are out of service, either temporarily or permanently, shall not be counted. A push door and a chuck door shall be counted as one (1) door. Compliance with this emission limit shall be determined in accordance with the procedure described in 326 IAC 11-3-4(c).
- (2) Charging emissions. No visible emissions shall be permitted from the charging system for more than a cumulative total of one hundred twenty-five (125) seconds during five (5) consecutive charging periods. For the purpose of this subdivision, "charging system" means the equipment required to add coal to a coke battery. This includes a larry car, charge ports, jumper pipe, and offtake pipe. Compliance with this emission limit shall be determined in accordance with the procedure contained in 326 IAC 11-3-4(a).
- (3) Pushing emissions. The following emission limits shall apply during pushing operations:

(A) The opacity of emissions from the coke-side of an oven to be pushed, before the first movement of the coke from the oven to the coke car begins, shall not exceed twenty percent (20%). The opacity shall be determined on an instantaneous basis at the top of the battery. The observer shall be positioned outside of the quench car rails.

(B) The opacity of emissions during the pushing operation shall not exceed twenty percent (20%). The pushing operation shall be considered to begin with the first movement of coke from the oven into the coke car and to end when the quench car enters the quench tower. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9\*, except that the readings shall be taken at fifteen (15) second intervals. Six (6) consecutive readings shall be averaged to determine the opacity. The observer shall only use those backgrounds that are above the elevation of the battery surface. If this condition cannot be met for six (6) consecutive readings, then the opacity shall be determined using the lesser number of consecutive readings.

(C) The particulate emissions from the control device stack shall not exceed four-hundredths (0.04) pounds per ton of coke pushed. Compliance with this emission limit shall be determined by 40 CFR 60, Appendix A, Method 5\*.

(4) Charge port lid emissions. No visible emissions shall be permitted from more than three percent (3%) of the total charge port lids on operating ovens of a coke oven battery. Compliance with this emission limit shall be determined in accordance with 326 IAC 11-3-4(b).

(5) Offtake piping emissions. No visible emissions shall be permitted from more than five percent (5%) of the total offtake piping on any coke oven battery. At no time shall the visible emissions from any gooseneck cap opening exceed twenty percent (20%). An exclusion from this opacity limit shall be allowed for two (2) minutes after a gooseneck cap is opened. The opacity shall be determined on an instantaneous basis. Compliance with this emission limit shall be determined in accordance with 326 IAC 11-3-4(b).

(6) Gas collector main emissions. No visible emissions shall be permitted from the gas collector main. Compliance with this emission limit shall be determined in accordance with 326 IAC 11-3-4(e). Caps on the main shall be exempt from this requirement during maintenance.

(7) Quenching emissions at USS. At a minimum, the following procedures and practices shall be followed:

(A) The quench water, as applied to the coke, shall not exceed one thousand five hundred (1,500) milligrams per liter dissolved solids.

~~(B) One (1) fifty (50) milliliter aliquot sample of quench water will be collected during each quenching operation at each quenching location by an automatic sampling system and composited into a refrigerated container. At the end of a twenty-four (24) hour sampling period, a composite sample consisting of a total of eighty-five (85) to two hundred (200) aliquots, depending upon the number of quenches performed, will have been collected at each location. The composite sample will be mixed and a representative sample obtained for analyses. The composite quench water sample from each location shall be analyzed using Method 2540C as found in Standard Methods for the Examination of Water and Wastewater, 17th Edition, published by the American Public Health Association\*\*.~~

~~(C) The automatic sampling system will draw fifty (50) milliliter aliquots from the header which feeds process water to the quench tower reservoirs during each quenching operation.~~

~~(D) The source shall submit results of the quench water analysis monthly to the office of air management.~~



(E)(B) A source shall submit the following information regarding its quenching operation in its CCP required to be submitted by section 10.1(l) of this rule:

(i) The source of quench water, for example, Lake Michigan water only, or a mixture of Lake Michigan water, spent quench water, and process water, and miscellaneous sources of nonprocess water.

(ii) The volume of quench water and the proportion of each source of water.

(F)(C) All coke oven towers shall be equipped with baffles. Baffles shall cover ninety-five percent (95%) or more of the cross-sectional area of the exhaust vent or stack for straight quench towers and must be maintained in operable condition. For offset quench towers numbers 2 and 3 at USSteel, the number and arrangement of baffles in the tower shall be maintained as designed. The source shall submit quench tower drawings showing baffle arrangement to the department and the U.S. EPA on or before December 10, 1993. Compliance with the quench tower baffle requirement shall be determined by comparison of the number and arrangement of baffles with the submitted plans.

(8) Underfire emissions requirements shall be as follows:

(A) Particulate emissions from underfire stacks shall be limited by the emission limitations contained in section 10.1(d) of this rule.

(B) Visible emissions from underfire stacks shall comply with the requirements set forth in 326 IAC 5-1-2.

(9) Precarbonization emissions requirements shall be as follows:

(A) Particulate emissions from precarbonization towers shall be limited by the emission limitations contained in section 10.1(d) of this rule.

(B) Visible emissions from precarbonization towers shall comply with the requirements set forth in 326 IAC 5.

(d) The coke batteries at Inland Steel, in lieu of subsection (c)(3), (c)(5), and (c)(8) above, shall comply with the requirements of section 10.1(k)(5)(D) of this rule.

\*Copies of the Code of Federal Regulations have been incorporated by reference and are available from the Government Printing Office, Washington, D.C. 20402 or the Indiana Department of Environmental Management, Office of Air Management.

\*\*These documents have been incorporated by reference and are available from the Indiana Department of Environmental Management, Office of Air Management, 105 South Meridian Street, Indianapolis, Indiana 46225. (*Air Pollution Control Board; 326 IAC 6-1-10.2; filed May 12, 1993, 11:30 a.m.: 16 IR 2391*)

**Notice of Public Hearing**

*Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on September 4, 2002 at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room C, Indianapolis, Indiana the Air Pollution Control Board will hold a public hearing on proposed amendments to 326 IAC 6-1-10.1.*

*The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed amendments. Oral statements will be heard, but for the accuracy of the record, all comments should be submitted in writing. Procedures to be followed at this hearing may be found in the April 1, 1996, Indiana Register, page 1710 (19 IR 1710).*

*Additional information regarding this action may be obtained from*

*Chris Pedersen, Rules Development Section, Office of Air Quality, (317) 233-6868 or (800) 451-6027, press 0, and ask for extension 3-6868 (in Indiana). If the date of this hearing is changed it will be noticed in the Change of Notice section of the Indiana Register. Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:*

*Attn: ADA Coordinator  
Indiana Department of Environmental Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015*

*or call (317) 233-0855. TDD: (317) 232-6565. Speech and hearing impaired callers also may contact the agency via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.*

*Copies of these rules are now on file at the Office of Air Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor East and Legislative Services Agency, One North Capitol, Suite 325, Indianapolis, Indiana and are open for public inspection.*

Janet G. McCabe  
Assistant Commissioner  
Office of Air Quality

**TITLE 326 AIR POLLUTION CONTROL BOARD**

**SECOND NOTICE OF COMMENT PERIOD**

**#02-55(APCB)**

**DEVELOPMENT OF A NEW RULE CONCERNING HAZARDOUS AIR POLLUTANT EMISSIONS FROM BOAT MANUFACTURING**

**PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for a new rule, 326 IAC 20-48, concerning national emission standards from hazardous air pollutants from boat manufacturing and amendments to 326 IAC 20-25, concerning emissions from reinforced plastics composites fabricating emission units. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**HISTORY**

First Notice of Comment Period: March 1, 2002, Indiana Register (25 IR 2045).

**CITATIONS AFFECTED:** 326 IAC 20-25; 326 IAC 20-48.

**AUTHORITY:** IC 13-15-2-1; IC 13-17-3-4.

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

On August 22, 2001, U.S. EPA issued a final national emission standard for hazardous air pollutants (NESHAP) (66 FR 44217) to reduce hazardous air pollutants (HAPs) from boat manufacturing. A correction to a spelling error and a formula in the final rule were

published on October 3, 2001 (66 FR 50504). The processes regulated include fiberglass resin and gel coat operations, carpet and fabric adhesive operations, and aluminum recreational boat painting operations. The NESHAP regulates organic HAPs from major sources that manufacture aluminum recreational boats, such as noncommercial and nonmilitary aluminum boats, and all types of fiberglass boats. Operations subject to the NESHAP include: open molding, closed molding, equipment cleaning, resin and gel coat mixing operations, carpet and fabric adhesive operations, surface coating, and spray gun cleaning and wipedown solvent operations. Typically these facilities are designated as Standard Industrial Classification (SIC) codes 3731 and 3732 or the North American Industry Classification System (NAICS) code 336612. In Indiana, less than ten (10) businesses are subject to the federal rule. Existing sources subject to the regulation are required to comply by August 23, 2004, and new and reconstructed sources must comply at initial startup. IDEM must incorporate the federal requirements into state rules or establish state requirements that are no less stringent.

The NESHAP will implement Section 112(d) of the Clean Air Act by requiring all boat manufacturing major sources to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). The national emission standard will reduce emissions of HAPs such as styrene, methyl methacrylate (MMA), methylene chloride, toluene, xylene, n-hexane, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), and 1,1,1-trichloroethane. The effects of exposure to any hazardous substance depends on the dose, the duration, how the exposure occurs, personal traits and habits, and whether other chemicals are present.

Boat manufacturers can demonstrate compliance with the NESHAP emission limits by any of the following means:

- (1) Averaging emissions with the MACT model point value equations.
- (2) Complying with equivalent material HAP content limits for each type of open molding operations.
- (3) Using an add-on control device.

In October 2000, the Air Pollution Control Board final adopted 326 IAC 20-25, Emissions from Reinforced Plastics Composites Fabricating Emission Units, that is applicable to open molding operations at boat manufacturing companies. The rule requires:

- using low styrene resins and gel coats;
- decreasing atomization by modifying how resins and gel coats are applied;
- limiting HAP containing cleaning solvents;
- decreasing evaporation of resins and gel coats by requiring work practice standards;
- assuring compliance with the rule with record keeping and reporting; and
- operator training for personnel involved in resin and gel coat spraying and spray-like applications.

Most of the requirements of the federal MACT rule duplicate requirements of the state rule for reinforced plastics composites. Some differences are the emissions averaging time, HAP content for nonatomized application of military and skin coat resins, work practice standards, and operator training. In some cases, the federal rule is more stringent than the state styrene rule, such as HAP content for atomized application of tooling resin and gel coat. The Indiana styrene rule is more stringent for other requirements, such as HAP content for routine cleaning solvents. IDEM has considered how to address the overlapping requirements of these two rules in a way that simplifies compliance but assures an overall level of environmental protection consistent with the elements of both rules. IDEM proposes the following approach:

- For the most part, sources subject to the federal rule will be exempt from the requirements of 326 IAC 20-25.
- Conditions of the state rule that are more stringent than the federal MACT standard will continue to apply to these sources.
- All requirements for boat manufacturers should be contained in a single rule: 326 IAC 20-48.

In addition, IDEM proposes to update the reference date of the "Unified Emission Factors for Open Molding of Composites" to July 2001 from April 1999. The updated emission factors include emissions from nonatomized gel coat applicators that significantly reduce emissions during the application of gel coats. For example, at thirty-seven percent (37%) styrene content in the gel coat, compliant with 326 IAC 20-25, the emissions drop from three hundred seventy-seven (377) pounds of styrene per ton of gel coat used to two hundred thirty-two (232) pounds per ton of gel coat used. The use of nonatomized gel coat applicators will require a commitment from the companies that choose to implement them. Nonatomized gel coat applicators are expensive, and require additional maintenance and employee training. The nonatomized application of gel coat technology was not available when the state styrene rule was final adopted by the Air Pollution Control Board. Due to the significant emissions reduction, IDEM proposes to include this technology in the rule for boat manufacturing.

**SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from March 1, 2002, through April 1, 2002, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received no comments in response to the first notice of public comment period.

**REQUEST FOR PUBLIC COMMENTS**

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language contained in the draft rule. Mailed comments should be addressed to:

#02-55(APCB) Boat MACT  
 Kathryn A. Watson, Chief  
 Air Programs Branch  
 Office of Air Quality  
 Indiana Department of Environmental Management  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor reception desk, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana, Monday through Friday, between 8:15 a.m. and 4:45 p.m.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Section at (317) 233-0426.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Jean Beauchamp, Rules Development Section, Office of Air Quality, (317) 232-8424 or (800) 451-6027, press 0, and ask for 2-8424 (in Indiana).

**DRAFT RULE**

SECTION 1. 326 IAC 20-25-1 IS AMENDED TO READ AS FOLLOWS:

## IC 13-14-9 Notices

### 326 IAC 20-25-1 Applicability

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11  
 Affected: IC 13-17-3

Sec. 1. (a) This rule applies to owners or operators of sources that emit or have the potential to emit ten (10) tons per year of any hazardous air pollutant (HAP) or twenty-five (25) tons per year of any combination of HAPs, and that meet all of the following criteria:

- (1) Manufacture reinforced plastics composites parts, products, or watercraft.
- (2) Have an emission unit where resins and gel coats that contain styrene are applied and cured using the open molding process.
- (3) Have actual emissions of styrene equal to or greater than three (3) tons per year.

(b) Except as provided in section ~~3(e)~~ **3(d)** of this rule, in the event there is a conflict between this rule and any existing federal or state statute or federal or state rule, the more stringent requirement shall apply.

**(c) If a source is subject to 326 IAC 20-48 concerning emission standards for hazardous air pollutants for boat manufacturing, the source is exempt from this rule after the following compliance dates for 326 IAC 20-48:**

- (1) August 23, 2004, for an existing source that is a major source on or before August 22, 2001.**
- (2) One (1) year after becoming a major source or August 22, 2002, whichever is later, for an existing or new nonmajor source.**
- (3) August 22, 2001, or upon startup, whichever is later, for a new major source.**

*(Air Pollution Control Board; 326 IAC 20-25-1; filed Feb 5, 2001, 9:23 a.m.; 24 IR 2406)*

SECTION 2. 326 IAC 20-25-3 IS AMENDED AS FOLLOWS:

### 326 IAC 20-25-3 Emission standards

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11  
 Affected: IC 13-17-3

Sec. 3. (a) Except as provided in subsections ~~(e)~~; ~~(f)~~; ~~(d)~~, ~~(e)~~, and ~~(h)~~; **(g)**, owners and operators of sources subject to this rule shall comply with the provisions of this section on or before January 1, 2002. The total **hazardous air pollutant** (HAP) monomer content of the following materials shall be limited depending on the application method and products produced as specified in the following tables:

TABLE I Fiber Reinforced Plastics Composites Products Except Watercraft	HAP Monomer Content, Weight Percent
Resin, Manual or Mechanical Application	
Production-Specialty Products	48*
Production-Noncorrosion Resistant Unfilled	35*
Production-Noncorrosion Resistant Filled (≥35% by weight)	38
Production, Noncorrosion Resistant, Applied to Thermoformed Thermoplastic Sheet	42
Production, Class I, Flame and Smoke	60*
Shrinkage Controlled	52
Tooling	43
Gel Coat Application	
Production-Pigmented	37
Clear Production	44

Tooling	45
Production-Pigmented, subject to ANSI <sup>a</sup> standards	45
Production-Clear, subject to ANSI <sup>a</sup> standards	50

<sup>a</sup> American National Standards Institute.

TABLE II Watercraft Products	HAP Monomer Content, Weight Percent
Resin, Manual or Mechanical Application	
Production-Specialty Products	48*
Production-Noncorrosion Resistant Unfilled	35*
Production-Noncorrosion Resistant Filled (≥35% by weight)	38
Shrinkage Controlled	52
Tooling	43*
Gel Coat Application	
Production-Pigmented and Base Coat Gel Coat	34
Clear Production and Tooling	48

\*Categories that must use mechanical nonatomized application technology or manual application as stated in subsection (b).

(b) Except as provided in subsection ~~(f)~~; **(e)**, the following categories of materials in subsection (a) shall be applied using mechanical nonatomized application technology or manual application:

- (1) Production noncorrosion resistant, unfilled resins from all sources.
- (2) Production, specialty product resins from all sources.
- (3) Tooling resins used in the manufacture of watercraft.
- (4) Production resin used for Class I flame and smoke products.

(c) Unless specified in subsection (b), gel coat application and mechanical application of resins shall be by any of the following spray technologies:

- (1) Nonatomized application technology.
- (2) Air-assisted airless.
- (3) Airless.
- (4) High volume, low pressure.
- (5) Equivalent emission reduction technologies to subdivisions (2) through (4).

**(d) Cleaning operations for resin and gel coat application equipment are as follows:**

- (1) For routine flushing of resin and gel coat application equipment such as spray guns, flowcoaters, brushes, rollers, and squeegees, a cleaning solvent shall contain no HAPs. This emission standard does not apply to solvents used for removing cured resin or gel coat from application equipment.**
- (2) A source must store HAP containing solvents used for removing cured resin or gel coat in containers with covers. The covers must have no visible gaps and must be in place at all times, except when equipment is placed in or removed from the container.**
- (3) Recycled cleaning solvents that contain less than or equal to five percent (5%) HAP by weight are considered to contain no HAP for the purposes of this subsection.**

**(e) (d)** A source that was issued a permit pursuant to 326 IAC 2 on or after June 28, 1998, but prior to the effective date of this rule, and that obtained a revised best available control technology (BACT)

determination in the permit for emission units, is not subject to this section until the permit is renewed, or the emission unit undergoes a modification that increases the potential to emit styrene.

~~(f)~~ (e) A new or reconstructed emission unit subject to 326 IAC 2-4.1-1 is not subject to the requirements of this section.

~~(g)~~ (f) The owner or operator of a source subject to this rule may comply with this section using monthly emission averaging within each resin or gel coat application category listed in subsection (a) without prior approval by the commissioner.

~~(h)~~ (g) Upon written application by the source, the commissioner may approve the following:

(1) Enforceable alternative emission reduction techniques that are at least equally protective of the environment as the emission standards in subsections (a) through ~~(d)~~ (c).

(2) Use of monthly emissions averaging for any or all material or application categories listed in subsection (a) if the following conditions are met:

(A) The source shows that emissions did not exceed the emissions that would have occurred if each emission unit had met the requirements of subsections (a) through (c).

(B) The source uses any one (1) or a combination of the following emission reduction techniques:

(i) Resins or gel coats with HAP monomer contents lower than specified in subsection (a).

(ii) Vapor suppressed resins.

(iii) Vacuum bagging or other similar technique. This item does not include resin transfer molding or compression molding.

(iv) Air pollution control equipment where the emissions are estimated based on parametric measurements or stack monitoring.

(v) Controlled spray used in combination with automated actuators or robots.

(vi) Controlled spray that includes the following:

(AA) Mold flanges.

(BB) Spray technique.

(CC) Spray gun pressure.

(DD) Means of verifying continuous use of the controlled spray technique, such as mass balance of materials and products (surface area and thickness of product), as approved by the commissioner prior to implementation.

(vii) Emission reduction techniques approved under subdivision (1).

Sources using averaging shall not use spray equipment that produces higher emissions than the equipment specified in ~~subsections~~ **subsection (c)(2) through (c)(5)**.

~~(i)~~ (h) To determine emission estimates, the following references or methods shall be used:

(1) "Unified Emission Factors for Open Molding of Composites", ~~April 1999\*~~, **July 2001\***, except use of controlled spray emission factors must be approved by the commissioner.

(2) "Compilation of Air Pollution Emission Factors ~~Volume 1, Fifth Edition, and supplements, January 1995\*, AP-42\*~~" as defined in **326 IAC 1-2-20.5**, except for hand layup and spray layup operations emission factors.

(3) Site-specific values or other means of quantification provided the site-specific values and the emission factors are acceptable to the commissioner and the U.S. EPA.

\*Copies of the "Compilation of Emission Factors" and "Unified Emission Factors for Open Molding of Composites" referenced in this

article are available for copying from the Office of Air Management, Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana. (*Air Pollution Control Board; 326 IAC 20-25-3; filed Feb 5, 2001, 9:23 a.m.: 24 IR 2408*)

SECTION 3. 326 IAC 20-25-4 IS AMENDED TO READ AS FOLLOWS

**326 IAC 20-25-4 Work practice standards**

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-17-3

Sec. 4. On or before March 1, 2001, each owner or operator of a source or emission unit subject to this rule shall operate in accordance with the following work practice standards:

(1) Nonatomizing spray equipment shall not be operated at pressures that atomize the material during the application process.

(2) Except for mixing containers as described in ~~subsection~~ **subdivision (7), hazardous air pollutant (HAP)** containing materials shall be kept in a closed container when not in use.

(3) Solvents sprayed during cleanup and resin changes shall be directed into solvent collection containers.

(4) Solvent collection containers shall be kept closed when not in use.

(5) Clean-up rags with solvent shall be stored in closed containers.

(6) Closed containers shall be used for the storage of the following:

(A) All production and tooling resins that contain HAPs.

(B) All production and tooling gel coats that contain HAPs.

(C) Waste resins and gel coats that contain HAPs.

(D) Cleaning materials, including waste cleaning materials.

(E) Other materials that contain HAPs.

**The covers of the closed containers must have no visible gaps and must be in place at all times, except when equipment is placed in or removed from the container.**

(7) All resin and gel coat mixing containers with a capacity equal to or greater than fifty-five (55) gallons must have a cover with no visible gaps in place at all times except when material is being added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

**(8) For routine flushing of resin and gel coat application equipment, such as spray guns, flowcoaters, brushes, rollers, and squeegees, owners or operators must use a cleaning solvent that contains no HAP. However, recycled cleaning solvents that contain less than or equal to five percent (5%) HAP by weight are considered to contain no HAP for the purposes of this subdivision. For removing cured resin or gel coat from application equipment, no organic HAP limit applies.**

(*Air Pollution Control Board; 326 IAC 20-25-4; filed Feb 5, 2001, 9:23 a.m.: 24 IR 2410*)

SECTION 4. 326 IAC 20-25-5 IS AMENDED TO READ AS FOLLOWS:

**326 IAC 20-25-5 Testing requirements**

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-17-3

Sec. 5. (a) An initial performance test is required when using air pollution control equipment to demonstrate compliance with the standards in section 3 of this rule. Testing shall be performed in accordance with 326 IAC 3-6, concerning source sampling procedures, and 40 CFR 63.7\*, (~~July 1, 1998\*~~), performance testing requirements.

(b) When using air pollution control equipment to demonstrate

compliance with the standards in section 3 of this rule, the following test methods shall be used:

- (1) 40 CFR 60, Method 25/25A, Appendix A\*, (~~July 1, 1998~~)\*, shall be used to measure total hydrocarbon emissions.
- (2) 40 CFR 60, Method 18, Appendix A\*, (~~July 1, 1998~~)\*, shall be used to measure styrene and methyl methacrylate emissions.
- (3) 40 CFR 51, Method 204, Appendix M\*, (~~July 1, 1998~~)\*, shall be used to determine capture efficiency. As an alternative to the procedures specified in 40 CFR 51, Method 204, Appendix M\*, (~~July 1, 1998~~)\*, an owner or operator required to conduct a capture efficiency test may use any capture efficiency protocol and test methods that satisfy the criteria of either the data quality objective or the lower confidence limit approach as described in the EPA Guidelines for Determining Capture Efficiency, which is included in Appendix A to Subpart KK to 40 CFR Part 63\*, (~~July 1, 1998~~)\*. The owner or operator may exclude work stations that have never been subject to such capture efficiency determinations.

(c) Compliance with the hazardous air pollutant (HAP) monomer content and usage limitations shall be determined using one (1) of the following:

- (1) The manufacturer's certified product data sheet.
- (2) The manufacturer's material safety data sheet.
- (3) Sampling and analysis, using any of the following test methods, as applicable:
  - (A) 40 CFR 60, Method 24, Appendix A\*, (~~July 1, 1998~~)\*, shall be used to measure the total volatile HAP content of resins and gel coats. Method 24 may be modified for measuring the volatile HAP content of resins or gel coats to require that the procedure be performed on uncatalyzed resin or gel coat samples.
  - (B) 40 CFR 63, Method 311, Appendix A\*, (~~July 1, 1998~~)\*, shall be used to measure HAP content in resins and gel coats by direct injection into a gas chromatograph.
  - (C) Upon written application by the source, the commissioner may approve an alternative test method.

When a MSDS, a certified product data sheet, or other document specifies a range of values, the values resulting in the greatest calculated emissions shall be used for determining compliance with this rule.

\*Copies of the Code of Federal Regulation (CFR) referenced in this section may be obtained from the Government Printing Office, Washington, D. C. 20204 or are available for copying from the Office of Air Management, Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 20-25-5; filed Feb 5, 2001, 9:23 a.m.: 24 IR 2410*)

SECTION 5. 326 IAC 20-48 IS ADDED TO READ TO READ AS FOLLOWS:

**Rule 48. Emission Standards for Hazardous Air Pollutants for Boat Manufacturing**

**326 IAC 20-48-1 Applicability; incorporation by reference of federal standards**

Authority: 13-15-2-1; 13-17-3-4  
Affected: IC 13-12-3-1

Sec. 1. (a) This rule applies to sources as provided in 40 CFR 63.5683\* (66 FR 44232, August 22, 2001, and 66 FR 50504, October 3, 2001).

(b) The air pollution control board incorporates by reference 40 CFR, Subpart VVVV\*, (66 FR 44232, August 22, 2001, and 66 FR 50504, October 3, 2001), National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing, except for the following gel coat applications in Table 2 to Subpart VVVV, 40 CFR 63\*; Alternative Organic Hazardous Content Requirements for Open Molding Resin and Gel Coat Operations:

- (1) 3. Pigmented gel coat operations.
- (2) 4. Clear gel coat operations.
- (3) 7. Tooling gel coat operations.

(c) Sources subject to this rule are exempt from 326 IAC 20-25 after the following compliance dates as provided in Table 1 to Subpart VVVV, 40 CFR 63\*; Compliance Dates for New and Existing Boat Manufacturing Facilities:

- (1) August 23, 2004, for an existing source that is a major source on or before August 22, 2001.
- (2) One (1) year after becoming a major source or August 22, 2002, whichever is later, for an existing or new nonmajor source.
- (3) August 22, 2001, or upon startup, whichever is later, for a new major source.

(d) A source shall use the following references or methods to estimate emissions:

- (1) "Unified Emission Factors for Open Molding of Composites", July 2001\*, except use of controlled spray emission factors must be approved by the commissioner and U.S. EPA.
- (2) "Compilation of Air Pollution Emission Factors AP-42"\*, as defined in 326 IAC 1-2-20.5, except for hand layup and spray layup operations emission factors.
- (3) Site-specific values or other means of quantification provided the site-specific values and the emission factors are acceptable to the commissioner and the U. S. EPA.

\*These documents are incorporated by reference. Copies may be obtained from the government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 20-48-1*)

**326 IAC 20-48-2 Alternative organic hazardous air pollutant content requirements for open molding gel coat operations**

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11  
Affected: IC 13-17-3

Sec. 2. In addition to alternative organic HAP content requirements for open molding resin operations contained in Table 2 to Subpart VVVV, 40 CFR 63, the alternative HAP content requirements for gel coat operations are as follows:

Gel Coat Application		You must not exceed this weighted-average percent organic HAP content (weight percent) requirement
For this operation	And this application method	
Pigmented gel coat operations	Atomized (spray)	33 percent
Clear gel coat operations	Atomized (spray)	48 percent

Tooling gel coat operations	Atomized (spray)	40 percent
Pigmented gel coat operations	Nonatomized (nonspray)	40 percent
Clear gel coat operations	Nonatomized (nonspray)	55 percent
Tooling gel coat operations	Nonatomized (nonspray)	54 percent

(Air Pollution Control Board; 326 IAC 20-48-2)

**326 IAC 20-48-3 Work practice standards**

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11  
 Affected: IC 13-17-3

Sec. 3. In addition to 40 CFR 63.5731\* and 40 CFR 63.5734(b)\*, the following work practice standards are required:

- (1) Nonatomizing spray equipment shall not be operated at pressures that atomize the material during the application process.
- (2) Solvents sprayed during cleanup and resin changes shall be directed into solvent collection containers.
- (3) For routine flushing of resin and gel coat application equipment, such as spray guns, flowcoaters, brushes, rollers, and squeegees, owners or operators must use a cleaning solvent that contains no hazardous air pollutant (HAP). However, recycled cleaning solvents that contain less than or equal to five percent (5%) HAP by weight are considered to contain no HAP for the purposes of this subdivision. For removing cured resin or gel coat from application equipment, no organic HAP limit applies.
- (4) Clean-up rags with solvent shall be stored in closed containers.
- (5) Closed containers shall be used for the storage of the following:
  - (A) All production and tooling resins that contain HAPs.
  - (B) All production and tooling gel coats that contain HAPs.
  - (C) Waste resins and gel coats that contain HAPs.
  - (D) Cleaning materials, including waste cleaning materials.
  - (E) Other materials that contain HAPs.

\*These documents are incorporated by reference. Copies may be obtained from the government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. (Air Pollution Control Board; 326 IAC 20-48-3)

**326 IAC 20-48-4 Operator training**

Authority: IC 13-14-8; IC 13-15-2-1; IC 13-17-3-4; IC 13-17-3-11  
 Affected: IC 13-17-3

Sec. 4. (a) Each owner or operator shall train all new and existing personnel, including contract personnel, who are involved in resin and gel coat spraying and applications that could result in excess emissions if performed improperly according to the following schedule:

- (1) All personnel hired shall be trained within fifteen (15) days of hiring.
- (2) To ensure training goals listed in subsection (b) are maintained, all personnel shall be given refresher training annually.
- (3) Personnel who have been trained by another owner or operator subject to this rule are exempt from subdivision (1) if written documentation that the employee's training is current is provided to the new employer.

(b) The lesson plans shall cover, for the initial and refresher training, at a minimum, all of the following topics:

- (1) Appropriate application techniques.
- (2) Appropriate equipment cleaning procedures.
- (3) Appropriate equipment setup and adjustment to minimize material usage and overspray.

(c) The owner or operator shall maintain the following training records on site and available for inspection and review:

- (1) A copy of the current training program.
- (2) A list of all current personnel, by name, that are required to be trained and the dates they were trained and the date of the most recent refresher training.

(d) Records of prior training programs and former personnel are not required to be maintained. (Air Pollution Control Board; 326 IAC 20-48-4)

**Notice of First Meeting/Hearing**

Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on September 4, 2002 at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room C, Indianapolis, Indiana, the Air Pollution Control Board will hold a public hearing on proposed amendments to 326 IAC 20-25 and new rules under 326 IAC 20-48.

The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed new rules. Oral statements will be heard, but for the accuracy of the record, all comments should be submitted in writing.

Additional information regarding this action may be obtained from Jean Beauchamp, Rules Development Section, Office of Air Quality, (317) 232-8424 or (800) 451-6027, press 0, and ask for 2-8424 (in Indiana).

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: ADA Coordinator  
 Indiana Department of Environmental Management  
 100 North Senate Avenue  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015

or call (317) 233-1785. TDD: (317) 232-6565. Speech and hearing impaired callers also may contact IDEM via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Office of Air Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor East, Indianapolis, Indiana and are open for public inspection.

**TITLE 326 AIR POLLUTION CONTROL BOARD**

**SECOND NOTICE OF COMMENT PERIOD  
 #02-122(APCB)**

**DEVELOPMENT OF AMENDMENTS TO A RULE CONCERNING PARTICULAR MATTER EMISSIONS AT RICHMOND POWER AND LIGHT COMPANY, WAYNE COUNTY**

## IC 13-14-9 Notices

### PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rule 326 IAC 6-1-14 concerning particulate rules, nonattainment area limitations, Wayne County. Additionally, IDEM may identify changes that are required to correct descriptive information associated with the Wayne County table. Such changes may include providing updates to company names or other descriptive information. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**CITATIONS AFFECTED:** 326 IAC 6-1-14.

**AUTHORITY:** IC 13-17-3-4; IC 13-17-3-11.

### SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

The Whitewater Station of the Richmond Power and Light Company (RP&L) is located at 2000 U.S. 27 South in Richmond, Wayne County, Indiana. This coal burning power plant consists of two (2) boilers with emissions of particulate matter that are controlled by precipitators serving each boiler. The plant generates approximately ninety-eight (98) megawatts (MW) of electric power. The emissions from the two (2) coal-fired boilers are vented through a common stack. The stack height is three hundred twenty-five (325) feet above the stack base. It was constructed in 1989, and replaced two (2) one hundred fifty (150) feet stacks previously in existence.

In a rule that became effective on July 15, 1995, and approved by U.S. EPA in the state implementation plan (SIP) on April 9, 1996, the particulate matter emission limits increased allowable particulate emissions to what was agreed to be more reasonable rates. The new rates were nineteen-hundredths (0.19) pound per million British thermal unit (BTU), changed from four-hundredths (0.040) pound per million BTU, for boiler number 1 and twenty-two hundredths (0.22) pound per million BTU, changed from seven-hundredths (0.070) pound per million BTU, for boiler number 2. The combined emissions from both boilers shall not exceed twenty-two hundredths (0.22) pound per million BTU. However, the rule also contained emission limits expressed in tons per year and based on the pound per million BTU heat input limits. The tons per year emission limits erroneously were not changed at the time the pound per million BTU limits were changed. IDEM proposes to change the tons per year emission limitations to three hundred twenty (320) for boiler number 1 and to seven hundred (700) for boiler number 2 to be consistent with the pounds per million BTU. The combined emissions from both boilers shall not exceed seven hundred (700) tons per year. This rulemaking will not have an adverse impact on air quality since no increase or decrease of emissions will occur.

### SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from May 1, 2002, through May 31, 2002, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received no comments in response to the first notice of public comment period.

### REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#02-122(APCB) (Richmond SIP)  
 Kathryn A. Watson, Chief  
 Air Programs Branch  
 Office of Air Quality  
 Indiana Department of Environmental Management  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor reception desk, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana, Monday through Friday, between 8:15 and 4:45 p.m.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-2342, Monday through Friday, between 8:15 and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Section at (317) 233-0426.

### COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Jean Beauchamp, Rules Section, Office of Air Quality, (317) 232-8424 or (800) 451-6027 (in Indiana).

### DRAFT RULE

SECTION 1. 326 IAC 6-1-14, AS AMENDED AT 25 IR 756, SECTION 15, IS AMENDED TO READ AS FOLLOWS:

**326 IAC 6-1-14 Wayne County**  
**Authority:** IC 13-17-3-4; IC 13-17-3-11  
**Affected:** IC 13-15; IC 13-17

Sec. 14. In addition to the emission limitations contained in section 2 of this rule, the following limitations apply to sources in Wayne County:

#### WAYNE COUNTY

Source	NEDS Plant ID	Point Input ID	Process	Emission Limits		
				tons/yr	lbs/million BTU	grains/dscf
Belden Wire and Cable (office)	0003	1P	Oil Boiler 39 MMBTU/Hr.	8.0	0.015	
Dana Perfect Circle-Richmond	0004	2P	Cupola	51.50		0.133
Joseph H. Hill Co. PLT-A	0007	5P	3 Oil Boilers (Single Stack) 30 MMBTU/Hr.	1.40	0.015	
		6P	Oil Boiler 22.5 MMBTU/Hr.	1.0	0.015	
Joseph H. Hill Co. PLT-B	0031	7P	3 Oil Boilers (Single Stack) 175 MMBTU/Hr.	5.60	0.015	
Joseph H. Hill Co. PLT-C	0032	8P	Oil Boiler No. 1 19 MMBTU/Hr.	0.70	0.015	
		9P	Oil Boiler No. 2 7 MMBTU/Hr.	0.30	0.015	
Dana Perfect Circle-Hagerstown	0014	10P	Gas Boiler 50 MMBTU/Hr.	2.10	0.010	

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Richmond Milestone Contractors	0008	13P	Rotary Dryer	50.80		0.158
Cambridge City Milestone Contractors	0028	14P	Rotary Dryer	67.4		0.218
Johns Manville Corporation	0006	15P	25 MMBTU/Hr. Natural Gas Boiler	1.5	0.0137	
		16P	Lines 2 and 3 Natural Gas Melt Furnaces	7.8		0.01
		17P	Line 6 Electric Melt Furnace	3.9		0.020
		19P	Line 3 Curing Oven	27.4		0.02
		20P	Line 6 Curing Oven	6.2		0.02
		21P	Line 2 Forming Process	58.3		0.02
		22P	Line 3 Forming Process	123.6		0.02
		23P	Line 6 Forming Process	45.4		0.02
Richmond State Hospital	0025	24P	(4 Gas/Oil Boilers) 123.4 MMBTU/Hr.	7.7	0.014	
Schrock Cabinet Company	0015	26P	Wood Boiler 10 MMBTU/Hr.	7.60	0.190	
		27P	Coal Boiler 10 MMBTU/Hr.	6.90	0.280	
Richmond Power & Light	0009	28P	Coal Boiler No. 1 385 MMBTU/Hr.	<del>71.6</del>	0.19**	
				<b>320**</b>		
		29P	Coal Boiler No. 2 730 MMBTU/Hr.	<del>233.3</del>	0.22**	
				<b>700**</b>		
Earlham College		31P	Oil Boiler 14 MMBTU/Hr.	0.70	0.080	
Purina Mills, Inc.	0033	32P	2 Oil Boilers One Stack 27 MMBTU/Hr.	1.0	0.015	
Wallace Metals	0011	33P	Oil Boiler 6.5 MMBTU/Hr.	0.10	0.015	
Design & Manufacturing		34P	1 Coal Boiler 43.5 MMBTU/Hr.	38.20	0.350	
Barrett Paving Materials	0029	24	Primary Crushing	17.40		
			Secondary Crushing	63.3		
			Screening/Conveying/Handling	292.4		
Wayne County Farm Bureau	0021	39	Shipping/Receiving, Transferring/Conveying, Screening/Cleaning, Drying	10.40		
Farmer's Grain	0017	47	Shipping, Receiving, Transferring, Conveying, Drying	732.0		
Belden Wire and Cable (plant)	0003	39	Plastic Compounding	8.0		
			Rubber Mixing	0.14		
			Pneumatic	10.80		

\*\*The combined emissions from Coal Boiler No. 1 and Coal Boiler No. 2 shall not exceed 0.22 lbs/MMBTU or 700 tons/year. (Air Pollution Control Board; 326 IAC 6-1-14; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2482; filed Jun 15, 1995, 1:00 p.m.: 18 IR 2727; errata filed Jul 6, 1995, 5:00 p.m.: 18 IR 2795; filed Sep 24, 1999, 9:57 a.m.: 23 IR 301; filed Nov 8, 2001, 2:02 p.m.: 25 IR 756)

**Notice of First Meeting/Hearing**

Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on September 4, 2002 at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Room C, Indianapolis, Indiana, the Air Pollution Control Board will hold a public hearing on proposed amendments to 326 IAC 6-1-14.

The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed amendments. Oral statements will be heard, but for the accuracy of the record, all comments should be submitted in writing.

Additional information regarding this action may be obtained from Jean Beauchamp, Rules Section, Office of Air Quality, (317) 232-8424 or (800) 451-6027 (in Indiana).

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: ADA Coordinator  
Indiana Department of Environmental Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015

or call (317) 233-0855. TDD: (317) 232-6565. Speech and hearing impaired callers may contact IDEM via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Office of Air Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, 10th Floor, Indianapolis, Indiana and are open for public inspection.

**TITLE 329 SOLID WASTE MANAGEMENT BOARD**

**FIRST NOTICE OF COMMENT PERIOD**  
#02-160(SWMB)

**DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING GROUND WATER QUALITY STANDARDS IN THE HAZARDOUS WASTE MANAGEMENT PERMIT PROGRAM AT 329 IAC 3.1**

**PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rules in 329 IAC 3.1 to



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## IC 13-14-9 Notices

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be consistent with the new ground water quality standards at 327 IAC 2-11. IDEM seeks comment on the affected citations listed and any other provisions of Title 329 that may be affected by this rulemaking.

**CITATIONS AFFECTED:** 329 IAC 3.1-9-2.

**AUTHORITY:** IC 13-14-8; IC 13-18-17; IC 13-19-3; 327 IAC 2-11.

### SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

IC 13-18-17-5 required the water pollution control board to adopt rules establishing ground water quality standards to:

- establish minimum compliance levels for ground water quality monitoring at regulated facilities;
- ban the discharge of effluents into potable ground water;
- establish health protection goals for untreated water in water supply wells; and
- establish concentration limits for contaminants in ambient ground water.

The new ground water quality standards at 327 IAC 2-11 were published on March 1, 2002, at 25 IR 1875. These new standards were effective on March 6, 2002, and apply to all IDEM programs.

The Office of Land Quality (OLQ) completed a survey of all OLQ rules in August 2001 and found that the rules limiting concentrations of hazardous constituents in ground water for permitted hazardous waste facilities were not fully consistent with the new ground water quality standards. This rule would amend Indiana's hazardous waste management program at 329 IAC 3.1 to be consistent with the new ground water quality standards.

Indiana is authorized under 42 U.S.C. 6926 and 40 CFR 271 to administer the hazardous waste management program in lieu of the U.S. Environmental Protection Agency. As required by 42 U.S.C. 6926, Indiana's hazardous waste management program must be at least as stringent as the federal hazardous waste management program. Amendments adopted in this rule cannot be less stringent than the federal hazardous waste management program in 40 CFR 260 through 40 CFR 273.

### STATUTORY AND REGULATORY REQUIREMENTS

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

### REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#02-160(SWMB) [Hazardous Waste Ground Water Quality Standards]

Marjorie Samuel

Rules, Planning and Outreach Section

Office of Land Quality

Indiana Department of Environmental Management

P.O. Box 6015

Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the receptionist on duty at the eleventh floor reception desk, Office of Land Quality, 100 North Senate Avenue, Eleventh Floor East, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 232-3403, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules, Planning and Outreach Section at (317) 232-1655 or (317) 232-7995.

### COMMENT PERIOD DEADLINE

Comments must be postmarked, hand delivered or faxed by July 31, 2002.

Additional information regarding this action may be obtained from Steve Mojonier of the Rules, Planning and Outreach Section, Office of Land Quality, (317) 233-1655 or call (800) 451-6027 (in Indiana), press 0, and ask for extension 3-1655.

Mary Beth Tuohy  
Assistant Commissioner  
Office of Land Quality

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## TITLE 329 SOLID WASTE MANAGEMENT BOARD

### SECOND NOTICE OF COMMENT PERIOD #00-185(SWMB)

### DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING SOLID WASTE LAND DISPOSAL FACILITIES

#### PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments concerning substantive changes to the rules for municipal solid waste landfills at 329 IAC 10. This rulemaking will provide clarification and consistency to these rules. The rulemaking also may add, modify, or delete requirements. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 329 that may be affected by this rulemaking.

#### HISTORY

First Notice of Comment Period: September 1, 2000, Indiana Register (23 IR 3221).

**CITATIONS AFFECTED:** 329 IAC 10-1-4; 329 IAC 10-1-4.5; 329 IAC 10-2-6; 329 IAC 10-2-11; 329 IAC 10-2-29; 329 IAC 10-2-33; 329 IAC 10-2-35.1; 329 IAC 10-2-41; 329 IAC 10-2-41.1; 329 IAC 10-2-53; 329 IAC 10-2-60; 329 IAC 10-2-63.5; 329 IAC 10-2-64; 329 IAC 10-2-66.1; 329 IAC 10-2-66.2; 329 IAC 10-2-66.3; 329 IAC 10-2-69; 329 IAC 10-2-74; 329 IAC 10-2-75; 329 IAC 10-2-75.1; 329 IAC 10-2-76; 329 IAC 10-2-96; 329 IAC 10-2-97.1; 329 IAC 10-2-99; 329 IAC 10-2-100; 329 IAC 10-2-105.3; 329 IAC 10-2-106; 329 IAC

10-2-109; 329 IAC 10-2-111.5; 329 IAC 10-2-112; 329 IAC 10-2-121.1; 329 IAC 10-2-127; 329 IAC 10-2-128; 329 IAC 10-2-132.2; 329 IAC 10-2-132.3; 329 IAC 10-2-142.5; 329 IAC 10-2-147.2; 329 IAC 10-2-149; 329 IAC 10-2-165.5; 329 IAC 10-2-172.5; 329 IAC 10-2-177; 329 IAC 10-2-181.2; 329 IAC 10-2-181.5; 329 IAC 10-2-181.6; 329 IAC 10-2-187.5; 329 IAC 10-2-203; 329 IAC 10-2-205; 329 IAC 10-3-1; 329 IAC 10-3-3; 329 IAC 10-6-4; 329 IAC 10-10-1; 329 IAC 10-10-2; 329 IAC 10-11-2.1; 329 IAC 10-11-2.5; 329 IAC 10-11-5.1; 329 IAC 10-11-6; 329 IAC 10-11-7; 329 IAC 10-12-1; 329 IAC 10-13-1; 329 IAC 10-13-5; 329 IAC 10-13-6; 329 IAC 10-14-1; 329 IAC 10-15-1; 329 IAC 10-15-2; 329 IAC 10-15-5; 329 IAC 10-15-8; 329 IAC 10-15-12; 329 IAC 10-16-8; 329 IAC 10-17-2; 329 IAC 10-17-7; 329 IAC 10-17-9; 329 IAC 10-17-12; 329 IAC 10-17-18; 329 IAC 10-19-1; 329 IAC 10-20-3; 329 IAC 10-20-8; 329 IAC 10-20-11; 329 IAC 10-20-12; 329 IAC 10-20-13; 329 IAC 10-20-20; 329 IAC 10-20-24; 329 IAC 10-20-26; 329 IAC 10-20-28; 329 IAC 10-21-1; 329 IAC 10-21-2; 329 IAC 10-21-4; 329 IAC 10-21-6; 329 IAC 10-21-7; 329 IAC 10-21-8; 329 IAC 10-21-9; 329 IAC 10-21-10; 329 IAC 10-21-13; 329 IAC 10-21-15; 329 IAC 10-21-16; 329 IAC 10-22-2; 329 IAC 10-22-3; 329 IAC 10-22-5; 329 IAC 10-22-6; 329 IAC 10-22-7; 329 IAC 10-22-8; 329 IAC 10-23-2; 329 IAC 10-23-3; 329 IAC 10-23-4; 329 IAC 10-24-4; 329 IAC 10-29-1; 329 IAC 10-30-4; 329 IAC 10-37-4; 329 IAC 10-39-1; 329 IAC 10-39-2; 329 IAC 10-39-3; 329 IAC 10-39-7; 329 IAC 10-39-9; 329 IAC 10-39-10.

**AUTHORITY:** IC 13-14-8; IC 13-19-3.

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

When the Indiana Department of Environmental Management (IDEM) revised rule language regarding municipal solid waste landfills effective April 13, 1996, the agency was asked by the solid waste management board to commit to re-examining the rules after six (6) months to address any areas of confusion that were revealed during implementation. This substantive change of 329 IAC 10 was completed and effective September 1999. Since this time, additional technical clarifications and changes have been deemed necessary to the rule. In addition, pursuant to IC 13-14-9.5 (regarding the expiration and readoption of administrative rules), IDEM received written comments that various sections in 329 IAC 10 should be separately readopted. As stated in the second notice of comment period for LSA # 00-47 (24 IR 169), these comments are addressed in this second notice. In an effort to further clarify 329 IAC 10, this current rulemaking may add, modify, or delete requirements of the regulated community. This rule will also add requirements from the Clean Water Act, Phase 2, Storm Water provisions as the requirements relate to landfills. This will allow landfills and associated construction to be permitted for storm water controls under 329 IAC 10, instead of separately permitted under 327 IAC 15-5 and 327 IAC 15-6.

**SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from September 1, 2000, through October 2, 2000, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. As noted above, the comments from LSA # 00-47 are also included. IDEM received comments from the following parties by the comment period deadline:

- Patrick Bennett, Indiana Manufacturers Association (IMA)
- Dan B. Magoun, Republic Services, Inc. (NSWMA)
- Sue A. Shadley, Plews, Shadley, Racher, & Braun (PSRB)
- Mark E. Shere, Bethlehem Steel Corporation (BSC)
- Richard J. Wigh, Regional Services Corp (RSC)

Following is a summary of the comments received and IDEM's responses thereto:

*Comment:* 329 IAC 10; This rule should undergo significant revisions to reflect the change in terminology as well as other requirements contained in SB372. The waste determination requirements in this rule should be simplified to provide a simple statement that generators should comply with the standards in 40 CFR 261 to determine whether a waste is hazardous. The waste categories in Section 8.1 should be deleted for those wastes disposed in Subtitle D landfills. Any nonhazardous waste should be considered suitable for disposal in a Subtitle D landfill. (IMA)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-2; Need to allow for changes or additional definitions resulting from changes in other rules and to allow for additional insignificant modifications. (NSWMA) (RSC)

*Response:* This comment does not address specific definition changes. If a specific definition is in question, additional information will need to be provided to IDEM before the department could address the issues. However, there are definitions that are being updated to reflect changes in other rules or current state statutes. Additional insignificant modifications have been added.

*Comment:* 329 IAC 10-2-41; Definition of "contaminant" needs to be revised to follow the definition at IC 13-11-2-42. (BSC)

*Response:* IDEM agrees. The definition will refer to the statute.

*Comment:* 329 IAC 10-2-54 and 329 IAC 10-2-61; Neither design or disposal capacity should include final cover volume. 329 IAC 10-2-154 also needs revision. (NSWMA) (RSC)

*Response:* Cover material needs to be included in a facility's design and disposal capacity in order to objectively manage closure, post-closure, and other site management issues related to a facility's capacity.

*Comment:* 329 IAC 10-2-78.1; Definition of "generator knowledge" should be deleted. Under IC 13-20-7.5(2) states that a waste generator is required to determine whether its waste is legally hazardous by following the federal EPA rules at 40 CFR 260 through 299 and 40 CFR 761. The definition above improperly imposes a series of vague, additional requirements ("relevant," "accurate" and "reliable") that have no counterpart in federal standards. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-2-85; Definition of "ground water" should be revised to follow the definition in the ground water quality standards that will shortly be considered for final adoption by the Water Pollution Control Board. (BSC)

*Response:* IDEM recognizes that there is a difference in the approach of the two definitions, however, both definitions properly describe what is meant by ground water. The Water Pollution Control Board's definition is simpler because it is designed to encompass all regulatory programs not just solid waste land disposal facilities. IDEM may consider how the various elements of the Water Board's definition works within the text of this rule and make changes accordingly.

*Comment:* 329 IAC 10-2-88.5; Under the definition of "Holding time," "maximum allowable elapsed time" should be changed to "recommended elapsed time," as in many cases holding times established are not based on a time period necessary to provide valid tests results and lists of laboratory holding times are notoriously unscientific. (BSC)

*Response:* IDEM disagrees. The holding times specified in most analytical methods represent maximum allowable time limits instead

of “recommended” time limits. Analyzing samples within the specified holding time helps ensure against degradation of sample integrity prior to analysis. While exceeding the holding time does not necessarily negate the veracity of the analytical results, it causes the qualifying or “flagging” of any data not meeting all of the specified acceptance criteria. The claim that “lists of laboratory holding times are notoriously unscientific” is not supported.

*Comment:* 329 IAC 10-2-95; Definition of “industrial process waste” should be updated with the industrial waste definition from SEA 372. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-2-141.3; Definition of “potable ground water source” should be consistent with the Water Board’s definition of “drinking water class” ground water. The 200 gallon/day figure still errs strongly on the low side. (BSC)

*Response:* At the time 329 IAC 10-2-141.3 was written, IDEM considered and included many of the elements contained in the Water Pollution Control Board’s definition. However, the Water Board’s definition has been revised several times since the writing of the current definition of “potable ground water source.” IDEM may consider the various elements of the Water Board’s definition within the working text of this rule and make changes accordingly.

*Comment:* 329 IAC 10-2-142; Definition of “practical quantitation limit” should include a disclaimer similar to EPA’s explanation that PQLs are “not part of the regulation.” For wastes, PQLs are established on a site-specific and media-specific basis, used for reference and guidance purposes. It would be misleading to use the PQL in the waste disposal regulations without acknowledging that PQLs for sampling of solid wastes are typically much higher than PQLs for constituents in water. (BSC)

*Response:* Under the federal Subtitle D regulations, specifically 40 CFR 257 and 258, Subpart E 258.53(h)(5) and 329 IAC 10-21-6(g)(6), the practical quantitation limit (PQL) is used in reference to analyzing ground water and statistical methods applied to ground-water data.

*Comment:* 329 IAC 10-2-158; Definition of “responsible corporate officer” should reflect that a division in charge or people on-site may be in charge of permitted principal business functions. Bethlehem Steel’s Burns Harbor Division employs approximately 6,000 people, but is not its own “corporation.” It is usually counterproductive to have senior officers from Bethlehem’s Pennsylvania headquarters sign environmental applications or certifications, rather than the people on-site in Indiana with actual operating responsibility. (BSC)

*Response:* IDEM will consider modifying this definition.

*Comment:* 329 IAC 10-2-174; Definition of “solid waste” should be revised to reflect IC 13-11-2-205. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-2-181; Definition of “storage” should be revised to reflect IC 13-11-2-223. Restricting storage to a “temporary” basis and creating a “rebuttable presumption” that the storage may not continue beyond 6 months conflicts with the statutory provision that storage may be conducted “for a period of years.” (BSC)

*Response:* IDEM disagrees. The definition at IC 13-11-2-223 is applicable only for hazardous waste and thus, does not conflict with 329 IAC 10-2-181, which applies only to solid waste, as regulated by 329 IAC 10.

*Comment:* 329 IAC 10-2-199.1; Definition of “waste determination” should either be deleted or revised to reflect IC 13-20-7.5(2), as adopted during the last legislative session. The legislature has made

clear that Indiana Law does not impose additional waste determination requirements beyond those specified in the federal regulations. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-2-201; Definition of “waste pile” should be deleted. Article 10 does not regulate waste piles, so it is unclear why this definition is included. It is not a useful term for purposes of solid waste regulation. The definition is so broad it has no correspondence to environmental safety. It would embrace a mound of asbestos lying on open ground (a real hazard) and equally embrace a few scraps of wood stored under a tarp on asphalt (no hazard). (BSC)

*Response:* IDEM disagrees. The terms “municipal solid waste landfill,” “municipal solid waste landfill unit,” “MSWLF,” and “MSWLF unit,” include the term “waste pile” in their definitions, which in part are derived from Subtitle D of RCRA as part of our state-authorization to administer the Subtitle D program. A definition of “waste pile” is therefore needed to properly understand and support those other definitions. A separate rulemaking, LSA #01-288, proposes to amend the reference terms. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-3; Need to allow for any revisions to 329 IAC 10-2-97.1. (NSWMA) (RSC)

*Response:* IDEM agrees.

*Comment:* 329 IAC 10-3-1; This section should be retained in its current form. The listed exclusions have worked well for decades and remain consistent with all statutory authority. (BSC)

*Response:* IDEM proposes to amend this section to provide additional clarification.

*Comment:* 329 IAC 10-5-1(b); The September 1, 1989, date in this section should be extended. Although a number of industries have submitted the information under this section, it appears that IDEM has taken action on few if any applications. An extension would allow additional facilities to join this process. Also, IDEM appears to be defining “disposal” in a more expansive manner today than it did in 1989, so that more on-site industrial activities potentially come within the scope of this section. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses this section. The second notice for LSA #01-288 is being published concurrently with this second notice. However, IDEM disagrees because facilities had the opportunity to submit information regarding the continuance of operating on-site in an interim period under section 2 until they could meet the new standards. This was adequate time and the deadline should not be extended.

*Comment:* 329 IAC 10-5-2; The application requirements criteria are more than a decade old and should be brought up to date to include additional information that bears directly on permit applications, such as ground water monitoring data. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses this section. However, the on-site notification provisions found at 329 IAC 10-5-1 were originally promulgated under 329 IAC 2 in 1989. They were provided as a transition provision for industrial-type waste disposal located on-site at the source of generation, which until then had not needed a permit. These provisions were then carried into 329 IAC 10 to allow any on-site notifier whose notification had not been acted on yet by IDEM to legally continue operations. In both 329 IAC 2 and 329 IAC 10, on-site notifiers were to have submitted all required information before September 1, 1989. Because this deadline is now past, it would be moot to change the submittal requirements of 329 IAC 10-5-2.

*Comment:* 329 IAC 10-6-1; Need to address the definition of what constitutes [closure] since the definition in 10-2-30 only references closure under the current rules. (NSWMA) (RSC)

*Response:* In 329 IAC 10-6, the term “closure” is not used. The rule also limits owner, operator, and permittee responsibilities at facilities closed prior to 329 IAC 10 to the rules and permits in effect when the facility closed, making the current definition of closure inapplicable.

*Comment:* 329 IAC 10-7.1; Under IC 13-20-7.5(2), a waste generator is required to determine whether its waste is legally hazardous by following the federal EPA rules at 40 CFR 260 through 299 and 40 CFR 761. Rule 7.1 adds to these federal requirements and should be deleted. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-8.1-1; The rule should be revised to reflect IC 13-20-7.5(2) more closely and to replace the term “special” waste with “industrial” waste. Paragraph (c), which concerns disposal in other states, merely relocates existing provisions. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-8.1-2(b); The section should be updated to follow IC 13-20-7.5, adopted last legislative session. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-8.1-2.5; A new section needs to be added to incorporate disposal provisions in IC 13-20-7.5, adopted during the last legislative session. In addition, it is important to tie generator notification requirements to only Indiana disposal facilities since disposal facilities in other states may have different requirements that must be met. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-8.1-3 through 329 IAC 10-8.1-11, and 329 IAC 10-8.1-13 and 329 IAC 10-8.1-14; Because IC 13-20-7.5, as adopted during the last legislative session, simplified the requirements for waste disposal, these sections should be deleted. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-8.1-12; “Special” waste should be changed to “industrial” waste. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-9-1 through 10-9-5; These sections, including the four sub-types of restricted waste facilities, are no longer necessary in light of the simplified requirements of IC 13-20-7.5. Pursuant to the statute, the other sections of this article should provide that all wastes may be disposed at Subtitle D landfills, and that other landfills may receive any wastes authorized by permit. Nothing further is necessary regarding “facility classification,” which is the purpose of this rule. (BSC)

*Response:* The statute referenced, IC 13-20-7.5, has been repealed. Regardless, the solid waste land disposal facility classifications are unaffected by the elimination of the special waste category under IC 13-20-7.5. These classifications are not based on whether or not a landfill accepts special waste, but according to the type of waste received based on either general characteristics (construction/demolition landfills) or waste analysis criteria found at 329 IAC 10-9-4 (restricted waste landfills.) Facility classifications provide a framework for efficient and effective permit issuance and compliance

review. 329 IAC 10-9-2 and 329 IAC 10-9-4 are proposed to be amended in a separate rulemaking, LSA #01-288.

*Comment:* 329 IAC 10-10; The entire rule needs updated and revised for clarity and consistency with IDEM guidance. (NSWMA) (RSC)

*Response:* This rulemaking is part of IDEM’s continuing efforts to update and revise this rule.

*Comment:* 329 IAC 10-11; IDEM has made it nearly impossible for new landfills (as opposed to lateral expansions of existing landfills) to be permitted in Indiana. The extraordinary difficulty of permitting new landfills mostly serves the economic interests of the existing landfills, by locking out competition. The lack of new landfills actually undermines public safety because waste shipments must travel needlessly long distances to existing sites, creating collision and spillage risks. In addition, the process of replacing older landfills with new ones meeting higher standards has been slowed. Every industry and every resident in Indiana pays higher disposal fees as a result of the lack of new facilities.

IDEM needs to work to make it practical for new landfills to obtain permits. Part of this work should consist of streamlining the formal application process for facilities that show they will meet the new Subtitle D standards. A major part of this work also needs to be informal. Permitting of new landfills should become an affirmative goal of the agency and should receive the full support and cooperation of the agency’s staff. (BSC)

*Response:* IDEM is committed to prompt and efficient permit review and issuance, as seen in the agency’s commitment of additional resources to the solid waste and other permit programs during the last several years. The current permitting requirements, though not simple, are needed to provide effective environmental protection and meet federal requirements.

*Comment:* 329 IAC 10-11; Minor changes need to be incorporated, particularly to 329 IAC 10-11-2.1, 11-4, 11-5 and 11-6 since the “Commissioner” has not necessarily issued format requirements for all narrative, plans and other support documentation. (NSWMA) (RSC)

*Response:* This question needs further clarification on what changes are desired before IDEM could proceed with modifications. Please also note that 329 IAC 10-11-4 and 10-11-5 were repealed as part of first substantial change rule in August 1999. 329 IAC 10-11-2.1 and 329 IAC 10-11-6 are proposed to be amended in this rulemaking.

*Comment:* 329 IAC 10-11-5.1; The six month requirement should be revised to 12 months or 12 months allowed if no significant changes in operational patterns have taken place. (NSWMA) (RSC)

*Response:* IDEM agrees and has made the appropriate changes.

*Comment:* 329 IAC 10-11-7; Based on prior experience with IDEM’s action related to construction and demolition disposal facilities, a separate rule appears to be needed for demonstration of need of those types of facilities as IDEM reviews the need for those facilities differently than for municipal waste landfills. In addition, reference to solid waste district plans which have not been updated as they should have been is no longer an appropriate guide for IDEM to determine need. (PSRB)

*Response:* The current demonstration of needs criteria are appropriate for both construction/demolition sites and municipal solid waste landfills; a separate rule for construction/demolition needs is not required. The solid waste district plans are only part of the total demonstration of needs review. Also, included in the review are quarterly report data and letters from the districts. The small number of construction/demolition sites statewide (less than 10) also aid in making a needs determination for this type of facility.

*Comment:* 329 IAC 10-12-5; Revisions needed to address the requirement to complete final cover within 180 days is not practical for units receiving a synthetic cap. Sufficient area needs to be available to

efficiently install a cap system and the cap should not be placed until primary settlement (3 years +/-) is complete. In the interim, the rules should allow placement of 24 inches of intermediate soil cover and the establishment of temporary vegetation. (NSWMA) (RSC)

*Response:* IDEM assumes you are referring to section 329 IAC 10-22-5. The 180 days is required by Subtitle D regulations, however, IDEM has made changes to address this issue by referring to the approved closure plan.

*Comment:* 329 IAC 10-13-1; The issuance procedures for original permits currently provides that a permit will be issued only if the applicant is in compliance with environmental statutes of the State of Indiana. This rule should be coordinated with the good character disclosure requirements and the provisions for approval or disapproval based on that statute. (PSRB)

*Response:* As one of the “environmental statutes of Indiana,” the good character provisions are already provided for in the permit process and do not need to be restated in this rule.

*Comment:* 329 IAC 10-15-4 should be reorganized, deleting redundant requirements and providing for situations where the regional hydrogeologic information is not available. (NSWMA) (RSC)

*Response:* The hydrogeologic site investigation report requirements section has been organized to obtain a document that will serve as reference for the development of the ground water monitoring system. IDEM has not found any redundancies in 329 IAC 10-15-4. Unless the comment can be more specific, no changes shall be made.

However, IDEM recognizes that there may appear to be redundancies between 329 IAC 10-15-4 and 329 IAC 10-21 4 (well construction and design). These “redundancies” are there to reiterate the ability of the facility to use the same information, even the same borings and wells, for the final monitoring system that was developed in the site investigation.

In virtually every case, the regional hydrogeologic information required may be limited to the information that is publicly available. In 329 IAC 10-15-4(b), it clearly states that, “The hydrogeologic site investigation report must include a description, *based on publicly available information*, of the regional hydrogeology of the MSWLF unit.” This means that information NOT publicly available won’t need to be included.

*Comment:* 329 IAC 10-15-5(a)(5); Revise to read “upgradient or background”. Revise any other section where it is not clear that background wells are suitable. (RSC)

*Response:* 329 IAC 10-15-5(a)(5) states, “A description of how upgradient wells will monitor the same hydrologic units as the downgradient monitoring wells.” The purpose of this requirement is specifically for separate wells that will be compared statistically in an inter-well (upgradient vs. downgradient) fashion.

To use both terms “upgradient” and “background” would be unnecessarily redundant. Therefore, IDEM agrees to change the term “upgradient” to “background” in order to prevent any further confusion.

*Comment:* 329 IAC 10-16-11(a)(9); “Intended to be used” needs to be deleted and the definition of 10-2-62.1 revised. (NSWMA) (RSC)

*Response:* A drinking water reservoir that is intended for providing drinking water, but has not yet been connected as a drinking water resource must still be protected to the same level as one that is currently in use.

*Comment:* 329 IAC 10-17-2(a)(2), 329 IAC 10-17-2(b)(2), 329 IAC 10-15-1(a)(14), 329 IAC 10-15-10, and 329 IAC 10-20-19; Ground water seeps into the detection zone from beneath the landfill. Ground water infiltration is hard to quantify. The rule requires the site to develop an action leakage rate (ALR) for the witness zone. The ALR has so many variables that it ends up being a guess without a good engineering basis. Also, it is likely that organic constituents can be

found in landfill gas and be detected when sampled, causing a false indicator of line leakage. Historically, those states that have required the witness zone have eliminated this requirement. IDEM should eliminate the witness zone requirement as well. (NSWMA)

*Response:* IDEM disagrees. The witness zone has been implemented for some years in other program areas and no major problems were noted. Witness zones are required in environmentally sensitive areas. IDEM believes that this requirement is fairly justified when a landfill is located over an aquifer of significance and there is not a continuous layer of at least ten (10) feet of nonaquifer material, as defined under 329 IAC 10-2-120. It is true that there are some variables in order to establish action leakage rate (ALR), but IDEM believes that with an accurate site hydrogeological study and engineering site investigation, the ALR can be fairly estimated. IDEM has a guidance document in regards to this subject that may help in how to approach this issue.

*Comment:* 329 IAC 10-17-2(b)(1)(A) and 329 IAC 10-17-2(b)(1)(B); Revise to a height of 2 feet above, but no closer than 5 feet from the ground surface in order to minimize surface water infiltration. (NSWMA) (RSC)

*Response:* IDEM agrees and the revision will be made.

*Comment:* Review this entire rule and delete unnecessary and outdated requirements. Allow previous pre-construction samples under 329 IAC 10-17-5 to serve to meet part of the requirements for subsequent construction using the same soils. (NSWMA) (RSC)

*Response:* IDEM is open to improvements in this rule, as demonstrated by this second substantial change rulemaking. It is not clear exactly which requirements the commentor finds unnecessary and outdated in the rule. The requirements that were mentioned regarding previous construction samples are commonly used and recommended for the construction of landfills.

*Comment:* Delete 329 IAC 10-17-7(a)(2)(C)(i) through 329 IAC 10-17-7(a)(2)(C)(iv), particularly (i), since this is not routinely performed nor is there a GRI GM13 specification. (NSWMA) (RSC)

*Response:* There is no explanation given as to why these sections of the rule should be deleted. No changes will be made at this time, unless more specific concerns are provided that would aid the agency in determining what revisions should be made.

*Comment:* Revise 329 IAC 10-17-9 to eliminate the inference that all of the properties or tests must be addressed or performed. (NSWMA) (RSC)

*Response:* IDEM has changed the language within this section and feels that it states what type of tests must be performed based on the type of drainage components being proposed.

*Comment:* Define in 329 IAC 10-17-12 when carbonate content testing is to be performed. (NSWMA) (RSC)

*Response:* The section on carbonate content testing has been moved to section 10-17-9 and now includes language which states that the test must be performed prior and during the installation of the protective cover in case of changes to the material.

*Comment:* Delete project engineer from 329 IAC 10-17-16 and replace with owner of operator. (NSWMA) (RSC)

*Response:* IDEM disagrees. The term is clearly defined at 329 IAC 10-2-144.

*Comment:* Revise the references in 329 IAC 10-17-17 to allow for updated versions. (NSWMA) (RSC)

*Response:* The ability to use other current industry standards under 329 IAC 10-17-17(4) already provides this flexibility.

*Comment:* 329 IAC 10-18-1; Vertical expansions of MSWLFs should be allowed provided a synthetic cap or other leachate limiting feature is installed. (NSWMA) (RSC)

*Response:* IDEM believes that the current language allows flexibility in regard to vertical expansion.

*Comment:* 329 IAC 10-19-1; A new section needs to be added allowing deviations to be described. (NSWMA) (RSC)

*Response:* IDEM disagrees. No changes will be made to the language.

*Comment:* 329 IAC 10-20-14.1; Revisions should be made to this rule to encourage productive use of industrial wastes as daily cover, encourage that they are amply protective, and are consistent with overall simplification of the disposal rules. (BSC)

*Response:* A separate rulemaking, LSA #01-288, addresses these issues. The second notice for LSA #01-288 is being published concurrently with this second notice.

*Comment:* 329 IAC 10-21; The current list of indicators (Table 1A) is too long and many of the parameters do not have an adequate contrast in concentration between leachate and natural ground water to be amenable to statistical analysis for detection of a release. Zinc and ammonia are poor indicators due to the high frequency of laboratory artifacts. The routine detection monitoring program should consist of no more than 4-6 parameters determined from an analysis of the leachate as compared to ground water. (NSWMA) (RSC)

*Response:* IDEM was required to develop these rules to be no less stringent than 40 CFR 258, Subtitle D. Appendix 1 of Part 258 (constituents for Detection Monitoring) dictates the list of indicators. Through consultation and approval with the U.S. EPA, IDEM reduced the original Subtitle D list from 62 constituents to 52 constituents.

Part of the reduction was to replace the total metals with constituents that are needed for attenuation analyses.

The contrast between leachate and natural ground water is not relevant. Many of the constituents of a ground water contaminant plume from a landfill are derived from ion exchange or reduction-oxidation response to the leachate introduction. They are natural elements in the soil but they are mobilized by leaks from the landfill. These constituents, many times, reflect the leading edge of a contaminant plume and are therefore the most important indicators.

Of the two constituents specified, Ammonia is absolutely necessary as an indicator regardless of poor laboratory practices. IDEM will further investigate the use of dissolved Zinc as an appropriate indicator.

*Comment:* 329 IAC 10-21; It is suggested that the entire ground water monitoring program section be revised in order to have a more meaningful and less troublesome monitoring program. Major changes to these sections should include at a minimum:

- No more than 4-6 site specific indicator parameters analyzed semiannually.
- The handling of statistical changes at an upgradient or background well(s).
- The remainder of Table 1A and 1B parameters analyzed annually.
- Elimination of zinc, ammonia, Eh and DO from the parameter lists.
- Table 2 sampling only at the affected well when a statistical exceedance is recorded.
- Elimination of total metals from being added as assessment parameters.
- Publication by IDEM of a minimum Standard Quality Assurance Program.(NSWMA) (RSC)

*Response:* Unless the comment is more specific with the suggested changes to the entire ground water monitoring program under 329 IAC 10-21, IDEM does not intend to make a major revision. However, the specific items listed in the comment are addressed below.

- Indicator parameters have been provided by 40 CFR part 258, as stated in the previous comment. Changes to this list do not allow for such radical reduction and any change must be done on a constituent-by-constituent basis.
- Background are the amassed data that are used for comparison. IDEM does not require statistical comparison within the background

and generally, no regulatory action is taken if statistical changes occur in the background dataset, unless the landfill is causing the statistical change. However, if data indicate that background wells have been contaminated by unnatural constituent levels or statistical changes have occurred, then the applicability of those wells as background must be questioned. IDEM does not disallow new additional data from the background wells from being used if statistical changes have occurred as long as the cause for the statistical changes have been thoroughly investigated.

- Annual monitoring during detection monitoring is presently (329 IAC 10-21-7(a)(4)) allowed and is based on site specific conditions.
- Ammonia, Eh, and DO are reduction-oxidation sensitive constituents that are important for determining, and assessing, localized changes in the chemical environment. These may be used to determine the initial stages and the progression of an anaerobic ground water plume.

As stated previously for dissolved Zinc, IDEM will further investigate the appropriateness of using dissolved Zinc as an indicator constituent.

•It is currently required that the wells that show a statistically significant increase (SSI) along with all adjacent wells be sampled for the Table 2 constituents. IDEM may consider changing this provision.

•In addition, eliminating total metals from the Table 2 list might preclude any demonstration that a total metals SSI was caused by turbulence rather than a dissolved plume.

•Development of a Standard Quality Assurance Program is not possible due to site-specific variations in sampling project objectives, methods, equipment, documentation, quality assurance and quality control criteria, and reporting formats. Guidance for developing a site-specific Quality Assurance Project Plan (QAPP), as required by 329 IAC 10-21-2(b)(13), is available by contacting the IDEM OLQ Chemistry Section.

*Comment:* 329 IAC 10-22-8; Readopt separately to require IDEM to issue any notice of deficiency within 90 days. (NSWMA) (RSC)

*Response:* IDEM agrees and the revision will be made.

*Comment:* 329 IAC 10-23-3(c)(5)(B); The HELP model requires using IDEM's parameters developed by the agency to run the model correctly to predict leachate generation. If you use IDEM's parameters, you get their results. IDEM has taken the stance that only their parameters are correct and others parameters are incorrect. The HELP model results as found in the rule do not reflect leachate generation rates that have been documented in the field historically. This rulemaking should be open for reconsideration of the HELP model parameters. (NSWMA)

*Response:* IDEM believes that the rule as written allows flexibility for other numbers, if supporting documentation is provided. However, the agency had been considering possible changes in reference to this issue. Please refer to 329 IAC 10-23-3(c)(5)(B) for an example.

*Comment:* 329 IAC 10-39-2(c); Readopt separately to provide a uniform submittal date not an undefined "annual submittal date". (NSWMA) (RSC)

*Response:* IDEM needs clarification on this comment. An example of the change wanted may help us better address this concern.

*Comment:* 329 IAC 10-13-3; The rules for duration of permit should be revised to be consistent with the statute that allows a permit term to be for ten (10) years. (PSRB)

*Response:* IC 13-15-3-2 only establishes the maximum time period a permit may be renewed. It also provides that the renewal period is to be for a period "determined by the department." Our experience indicates that the current five (5) year renewal period provides the best combination of permit duration and updated review to protect the environment.

**REQUEST FOR PUBLIC COMMENTS**

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#00-185 (SWMB) MSWLF Second Substantive Changes  
Marjorie Samuel  
Rules, Planning and Outreach Section  
Office of Land Quality  
Indiana Department of Environmental Management  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the IDEM receptionist on duty at the eleventh floor reception desk, Office of Land Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana, Monday through Friday, between 8:15 a.m. and 4:45 p.m.

Comments may be submitted by facsimile at (317) 232-3403, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules, Planning and Outreach Section, at (317) 232-7995 or (317) 232-8899.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Pam Koons, in the Rules, Planning and Outreach Section, Office of Land Quality, (317) 232-8899 or (800) 451-6027 (in Indiana).

**DRAFT RULE**

SECTION 1. 329 IAC 10-1-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-1-4 Records and standards for submitted information**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 4. (a) Any owner, operator, or permittee required to monitor under this article or by any permit issued under this article, shall maintain all records of all monitoring information and monitoring activities, including:

- (1) the date, exact place, and time of the sampling measurements;
- (2) the sampling methods used;
- (3) the person or persons who performed the sampling or measurements;
- (4) the date or dates analyses were performed;
- (5) the person or persons who performed the analyses;
- (6) the analytical techniques or methods used;
- (7) the results of such measurements or analyses; and
- (8) all quality assurance/quality control documentation.

(b) The owner, operator, or permittee of a solid waste land disposal facility shall record and retain at the facility in an operating record, or, in an alternative location approved by the commissioner, any records required by this article.

(c) All records of monitoring activities required by this article and results thereof shall be retained by the owner, operator, or permittee of a solid waste land disposal facility for three (3) years, unless otherwise specified in this article. The three (3) year period shall be extended:

- (1) automatically during the course of any unresolved litigation between the commissioner and a permittee of a solid waste land disposal facility; or
- (2) as required by the permit conditions.

(d) Information submitted to the department to meet a requirement of this article must meet the following standards:

- (1) All drawings, plans, maps, and documentation must be properly titled.
- (2) All drawings, plans, and maps must include the following:
  - (A) The date and author of each drawing, plan, or map.
  - (B) Documentation of the coordinate system of the drawing, plan, or map, including the following:
    - (i) Measurement units.
    - (ii) Datum.
    - (iii) Identification of the coordinate system that was used such as the Universal Transverse Mercator or the State Plane coordinate system.
  - (C) A bar scale on each drawing, plan, or map.
  - (D) Elevations that correlate with United States Geological Survey mean sea level data.
  - (E) The facility name.
  - (F) The state regulatory identification number, such as permit number or authorization number.
  - (G) The facility United States Environmental Protection Agency identification number, if available.
  - (H) A north arrow.
  - (I) A map legend.

*(Solid Waste Management Board; 329 IAC 10-1-4; filed Mar 14, 1996, 5:00 p.m.; 19 IR 1763; filed Aug 2, 1999, 11:50 a.m.; 22 IR 3762)*

SECTION 2. 329 IAC 10-1-4.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-1-4.5 Electronic submission of information**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 4.5. (a) Electronic submission of information required by this article may be requested by the commissioner. The format and submittal mechanism will be prescribed by the commissioner. Any information submitted on electronic media also must be submitted as a paper copy or copies as required by this article.

(b) Electronically submitted information must meet the following requirements:

- (1) Section 4 of this rule.
- (2) The submittal deadlines of this article.

(c) In addition to the requirements of subsection (b), submittals of drawings, plans, or maps must meet one (1) of the following requirements:

- (1) Be submitted in the Universal Transverse Mercator (UTM), State Plane coordinate system, North American Datum (NAD) 1983 or NAD 1927 that includes a description of the coordinates on the document as annotation or described in a text file included with the drawing, plot plan, or map file. The description must include the following:
  - (A) Measurement units.
  - (B) Datum.
  - (C) Identification of the coordinate system.
- (2) Provide information regarding the survey coordinate system used to create the drawings, plans or maps, including the following:
  - (A) At least two (2), but preferably four (4) or more reference locations, field marked and of at least the third order, on each drawing, plan, or map if the site was surveyed.

(B) Coordinates for the reference locations in clause (A) should be supplied in either Universal Transverse Mercator (UTM) or State Plane coordinate system and may be submitted in a separate text file or as annotation on the drawing, plan, or map.

(C) Accuracy, precision, and the manner in which coordinates in clause (A) were determined for the reference coordinates is documented in a narrative on the drawing, plan, or map or in a metadata file.

(d) In addition to requirements of subsection (b), submittals of sampling and monitoring results must include the following:

- (1) Results of laboratory analyses.
- (2) Results of field measurements, including water elevations and well depths, if applicable.
- (3) Laboratory name.
- (4) Date of the sampling or monitoring event.

(Solid Waste Management Board; 329 IAC 10-1-4.5)

SECTION 3. 329 IAC 10-2-11 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-11 "Aquiclude" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 11. "Aquiclude" means a body of relatively impermeable rock material that is capable of absorbing water slowly but does not transmit rapidly enough to supply a well or spring. (Solid Waste Management Board; 329 IAC 10-2-11; filed Mar 14, 1996, 5:00 p.m.: 19 IR1764)

SECTION 4. 329 IAC 10-2-35.1 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-35.1 "Confining unit" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 35.1. "Confining unit" means a body of relatively impermeable material, which is stratigraphically adjacent to an identified aquifer system, and that has a hydraulic conductivity of:

- (1) less than or equal to a hydraulic conductivity of  $10^{-6}$  cm/sec; or
- (2) two (2) orders of magnitude slower than the average hydraulic conductivity of the aquifer within the stratigraphic column if that average is on the order of  $10^{-5}$  cm/sec.

(Solid Waste Management; 329 IAC 10-2-35.1)

SECTION 5. 329 IAC 1-2-41 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-41 "Contaminant" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2-42; IC 13-30-2; IC 36-9-30

Sec. 41. "Contaminant" means any of the following:

- (1) Pollutant as defined in the Federal Water Pollution Control Act (33 U.S.C. 1362, as amended November 18, 1988).
- (2) Radioactive material as regulated by the Atomic Energy Act of 1954 (42 U.S.C. 2014, as amended October 24, 1992).
- (3) Solid or hazardous waste as determined by the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq., as effective January 1, 1989).
- (4) Hazardous substance as defined by the Comprehensive Environ-

mental Response, Compensation, and Liability Act (42 U.S.C. 9601 et seq., as amended November 23, 1988).

(5) Any toxic substance as determined by the Toxic Substances Control Act (15 U.S.C. 2603 et seq., as amended October 22, 1986).

(6) Any commingled waste containing waste as defined in subdivisions (1) through (5); from whatever source that:

- (A) is injurious to human health, plant or animal life, or property;
- (B) interferes unreasonably with the enjoyment of life or property; or
- (C) is otherwise violative of this article.

has the meaning set forth in IC 13-11-2-42. (Solid Waste Management Board; 329 IAC 10-2-41; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1768)

SECTION 6. 329 IAC 10-2-41.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-41.1 "Conterminous" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 41.1. "Conterminous" means contained within the same boundaries: **common boundary.** (Solid Waste Management Board; 329 IAC 10-2-41.1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1769)

SECTION 7. 329 IAC 10-2-63.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-63.5 "Electronic submission" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 63.5. "Electronic submission" means any submission of information to IDEM via electronic media. Such media may include the following:

- (1) Magnetic storage tape or disk.
- (2) Compact disk read-only memory (CD-ROM).
- (3) Electronic mail and /or attachments.
- (4) File transfer protocol (FTP).
- (5) Hypertext transfer protocol (HTTP).

(Solid Waste Management Board; 329 IAC 10-2-63.5)

SECTION 8. 329 IAC 10-2-64 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-64 "Endangered species" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 64. "Endangered species" has the meaning set forth in means any species listed as endangered or threatened under 312 IAC 9-3-19, 312 IAC 9-4-14, 312 IAC 9-5-4, and 312 IAC 9-6-9, or 329 IAC 9-9-4. (Solid Waste Management Board; 329 IAC 10-2-64; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1771)

SECTION 9. 329 IAC 10-2-66.1 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-66.1 "Erosion" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 66.1. "Erosion" means the detachment and movement of soil, sediment, or rock fragments by water, wind, ice, or gravity. (Solid Waste Management Board; 329 IAC 10-2-66.1)



## IC 13-14-9 Notices

SECTION 10. 329 IAC 10-2-66.2 IS ADDED TO READ AS FOLLOWS:

### 329 IAC 10-2-66.2 "Erosion and sediment control measure" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 66.2. "Erosion and sediment control measure" means a practice, or a combination of practices, to control erosion and resulting sedimentation. (*Solid Waste Management Board; 329 IAC 10-2-66.2*)

SECTION 11. 329 IAC 10-2-66.3 IS ADDED TO READ AS FOLLOWS:

### 329 IAC 10-2-66.3 "Erosion and sediment control system" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 66.3. "Erosion and sediment control system" means a combination of appropriate erosion and sediment control measures that address the deposition of sediment by reducing sediment at the source as well as at the point of discharge from the site. (*Solid Waste Management Board; 329 IAC 10-2-66.3*)

SECTION 12. 329 IAC 10-2-69 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-69 "Facility" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 69. "Facility" may consist of one (1) or more permitted processing, storage, disposal, or operational units used for processing, storing in conjunction with processing or disposal, or disposing of solid waste. The term includes:

- (1) all conterminous land and structures related to the permit **within the facility boundary**;
- (2) other appurtenances related to the permit; and
- (3) improvements on the land related to the permit.

(*Solid Waste Management Board; 329 IAC 10-2-69; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1772*)

SECTION 13. 329 IAC 10-2-74 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-74 "Flood plain" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 74. "Flood plain" means the areas adjoining a river, stream, or lake that are inundated by the base flood. ~~as determined by 310 IAC 6-~~ (*Solid Waste Management Board; 329 IAC 10-2-74; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1772*)

SECTION 14. 329 IAC 10-2-75 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-75 "Floodway" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 75. "Floodway" means the channel of a river or stream and those portions of the flood plain adjoining the channel that are

reasonably required to efficiently carry and discharge the peak flow ~~from~~ of the base flood. ~~as determined by 310 IAC 6-~~ (*Solid Waste Management Board; 329 IAC 10-2-75; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1772*)

SECTION 15. 329 IAC 10-2-75.1 IS ADDED TO READ AS FOLLOWS:

### 329 IAC 10-2-75.1 "Floodway fringe" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 75.1. "Floodway fringe" means any area of flood plain that has not been adequately protected from flooding by the base flood by means of dikes, levies, reservoirs, or other similar works. (*Solid Waste Management Board; 329 IAC 10-2-75.1*)

SECTION 16. 329 IAC 10-2-96 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-96 "Infectious waste" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 96. "Infectious waste" has the meaning set forth in **the rules of the state board of health at 410 IAC 1-3-10**, as supported by the ancillary definitions of 410 IAC 1-3. ~~and applies to facilities regulated under 410 IAC 1-3-~~ (*Solid Waste Management Board; 329 IAC 10-2-96; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1775; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045*)

SECTION 17. 329 IAC 10-2-97.1 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-97.1 "Insignificant facility modification" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 97.1. "Insignificant facility modification" means the following:  
(1) Relocation of a solid waste land disposal facility waste hauling road.

(2) Relocation of office buildings.

(3) Changes in sequences of filling in permitted areas.

(4) Installation of temporary sediment control measures.

(5) Installation of leachate control systems to prevent leachate migration off-site.

(6) Installation of additional methane venting wells to an approved system.

(7) Installation of weighing scales.

(8) Replacement of a **ground water monitoring well or piezometer** no more than ~~ten (10)~~ **fifteen (15)** feet horizontally from the original location and at an equal depth.

(9) An alternative daily cover (ADC) under 329 IAC 10-20-14.1(c).

(10) Approvals granted under 329 IAC 10-21 unless the commissioner determines otherwise.

(11) ~~Any modification to the solid waste land disposal facility that the commissioner determines will improve the operation of the facility without significantly altering the approved solid waste land disposal permit.~~ **Alternative storage methods for salvaged and recycled materials under 329 IAC 10-20-6(b).**

(12) An ADC under 329 IAC 10-20-14.1(d).

(13) Improvements to drainage at the facility **or modifications to sediment controls.**

(14) **Changes in the frequency that collection containers regu-**

lated under 329 IAC 10-20-4(g)(1) and 329 IAC 10-20-4(g)(2) must be emptied.

**(15) Any modification to the solid waste land disposal facility that the commissioner determines will improve the operation of the facility without significantly altering the approved solid waste land disposal permit.**

*(Solid Waste Management Board; 329 IAC 10-2-97.1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1775; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2746; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3765)*

SECTION 18. 329 IAC 10-2-99 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-99 “Karst terrain” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 99. “Karst ~~terrains~~<sup>22</sup> terrain” means an area where karst topography, ~~with its~~ **including** the characteristic surface and subterranean features, ~~is~~ **has** developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present ~~to~~ **in** karst terrains include any of the following:

- (1) Sinkholes.
- (2) Sinking streams.
- (3) Caves.
- (4) Large springs.
- (5) Blind valleys.

*(Solid Waste Management Board; 329 IAC 10-2-99; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1775)*

SECTION 19. 329 IAC 10-2-100 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-100 “Land application unit” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 100. “Land application unit” means an area where waste is applied onto or incorporated **or injected** into the soil surface excluding manure spreading operations, for agricultural purposes. *(Solid Waste Management Board; 329 IAC 10-2-100; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1775)*

SECTION 20. 329 IAC 10-2-105.3 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-105.3 “Licensed professional geologist” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 25-17.6-1-6.5; IC 36-9-30

**Sec. 105.3. “Licensed professional geologist” means a person who is licensed as a geologist by the state under IC 25-17.6-1-6.5.** *(Solid Waste Management Board; 329 IAC 10-2-105.3)*

SECTION 21. 329 IAC 10-2-106 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-106 “Liquid waste” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 106. “Liquid waste” means any waste material that contains free liquids as determined by Method ~~9095~~ **9095A** (Paint Filter Liquids Test), as described in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods”, EPA Publication SW-846 (Third

Edition, November 1986, as amended by ~~Updates~~ **Updates** (July 1992); ~~2~~ (September 1994); ~~2A~~ (August 1993); and ~~2B~~ (January 1995); **Update 3 (December 1996)**). *(Solid Waste Management Board; 329 IAC 10-2-106; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1776)*

SECTION 22. 329 IAC 10-2-109 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-109 “Major modification of solid waste land disposal facilities” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 109. “Major modification of solid waste land disposal facilities” means any increase in a permitted solid waste land disposal facility that would:

- (1) increase the permitted capacity to process or dispose of solid waste by the lesser of:
  - (A) more than ten percent (10%); or
  - (B) five hundred thousand (500,000) cubic yards; or
- (2) ~~change~~ **increase** the permitted solid waste boundary by more than one (1) acre.

*(Solid Waste Management Board; 329 IAC 10-2-109; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1776; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3766)*

SECTION 23. 329 IAC 10-2-111.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-111.5 “Measurable storm event” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

**Sec. 111.5. “Measurable storm event” means a precipitation event, which results in a total measured precipitation accumulation equal to, or greater than, one-tenth (0.1) inch of rainfall.** *(Solid Waste Management Board; 329 IAC 10-2-111.5)*

SECTION 24. 329 IAC 10-2-112 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-112 “Minor modification of solid waste land disposal facilities” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 112. (a) “Minor modification of solid waste land disposal facilities” means any increase in a permitted solid waste land disposal facility that would not:

- (1) increase the facility’s permitted capacity to dispose of solid waste by the lesser of:
  - (A) more than ten percent (10%); or
  - (B) five hundred thousand (500,000) cubic yards;
- (2) change the permitted solid waste boundary by more than one (1) acre;
- (3) include those items determined to be insignificant modifications by 329 IAC 10-3-3(b) or by the commissioner; or
- (4) include those items determined to be major modifications by section 109 of this rule.

(b) The term includes:

- (1) an alternative daily cover (ADC) under 329 IAC 10-20-14.1(e); ~~and~~
- (2) a baled waste management plan under 329 IAC 10-20-31(3); ~~and~~
- (3) a borrow pit:**

- (A) owned by the facility;
- (B) not previously permitted by the department on the latest effective date of this section; and
- (C) located on-site or on property adjoining the facility.

(Solid Waste Management Board; 329 IAC 10-2-112; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1777; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3766)

SECTION 25. 329 IAC 10-2-121.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-121.1 “Nonmunicipal solid waste landfill unit” or “non-MSWLF unit” defined**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
Affected: IC 13-11-2; IC 36-9-30

Sec. 121.1. “Nonmunicipal solid waste landfill unit” or “non-MSWLF unit” means a discrete area of land or an excavation that is permitted to receive general types of solid waste, excluding municipal solid waste as defined in section 115 of this rule and hazardous waste regulated by 329 IAC 3.1, for disposal and that is not a land application unit, surface impoundment, injection well, or waste pile. ~~as those terms are defined in 40 CFR 257.2:~~ Such a landfill unit may be publicly or privately owned. A nonmunicipal solid waste landfill unit may be a new nonmunicipal solid waste landfill unit, an existing nonmunicipal solid waste landfill unit, or a lateral expansion. (Solid Waste Management Board; 329 IAC 10-2-121.1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1765; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1703, eff one hundred eighty (180) days after filing with the secretary of state; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3767)

SECTION 26. 329 IAC 10-2-132.2 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-132.2 “Peak discharge” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 132.2. “Peak discharge” means the maximum rate of flow during a storm, usually in reference to a specific design storm event. (Solid Waste Management Board; 329 IAC 10-2-132.2)

SECTION 27. 329 IAC 10-2-132.3 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-132.3 “Permanent stabilization” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 132.3. “Permanent stabilization” means the establishment, at a coverage of ninety percent (90%) across the disturbed area, of vegetative cover or permanent nonerosive material that will ensure the resistance of the soil to erosion, sliding, or other movement. (Solid Waste Management Board; 329 IAC 10-2-132.3)

SECTION 28. 329 IAC 10-2-142.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-142.5 “Preliminary exceedance” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 142.5. “Preliminary exceedance” means the statistically significant increase in concentration of any constituent, as determined under 329 IAC 10-21-4, prior to the increase being verified

under 329 IAC 10-21-8. (Solid Waste Management Board; 329 IAC 10-2-142.5)

SECTION 29. 329 IAC 10-2-147.2 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-147.2 “Qualified professional” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 147.2. “Qualified professional” means, regarding only 329 IAC 10-15-12 and 329 IAC 10-20-11, an individual who has experience and training in storm water management techniques and related fields as may be demonstrated by state registration, professional certification, experience, or completion of coursework that enable the individual to make sound, professional judgments regarding storm water control or treatment and monitoring pollutant fate and transport, and drainage planning. (Solid Waste Management Board; 329 IAC 10-2-147.2)

SECTION 30. 329 IAC 10-2-165.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-165.5 “Sedimentation” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 165.5. “Sedimentation” means the settling and accumulation of unconsolidated material carried by run-off, including storm water run-off. (Solid Waste Management Board; 329 IAC 10-2-165.5)

SECTION 31. 329 IAC 10-2-172.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-172.5 “Soil and Water Conservation District” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 172.5. “Soil and Water Conservation District” or “SWCD” means a political subdivision established under IC 14-32. (Solid Waste Management Board; 329 IAC 10-2-172.5)

SECTION 32. 329 IAC 10-2-181.2 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-181.2 “Storm water discharge” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 181.2. “Storm water discharge” means the release or flow of storm water from a distinct conveyance. (Solid Waste Management Board; 329 IAC 10-2-181.2)

SECTION 33. 329 IAC 10-2-181.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-181.5 “Storm water pollution prevention plan” or “SWP3” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 181.5. “Storm water pollution prevention plan” or “SWP3” means a written plan to minimize the impact of storm water pollutants, including storm water run-off, resulting from construction and landfill operation activities. (Solid Waste Management Board; 329 IAC 10-2-181.5)

SECTION 34. 329 IAC 10-2-181.6 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-181.6 “Storm water quality measure” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

**Sec. 181.6. “Storm water quality measure” means a practice, or a combination of practices, to control or minimize pollutants associated with storm water run-off.** (*Solid Waste Management Board; 329 IAC 10-2-181.6*)

SECTION 35. 329 IAC 10-2-187.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-187.5 “Temporary stabilization” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

**Sec. 187.5. “Temporary stabilization” means the covering of soil to ensure its resistance to erosion, sliding, or other movement. The term includes vegetative cover, anchored mulch, or other nonerosive material applied at a coverage of seventy percent (70%) across the disturbed area.** (*Solid Waste Management Board; 329 IAC 10-2-187.5*)

SECTION 36. 329 IAC 10-3-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-3-1 Exclusions; general**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-14; IC 13-19-3; IC 13-20; IC 36-9-30

Sec. 1. The following solid waste management activities are not subject to the provisions of this article:

- (1) Disposing of only uncontaminated rocks, bricks, concrete, road demolition waste materials, or dirt.
- (2) Land application activities regulated by ~~327 IAC 6~~ **under rules of the water pollution control board at 327 IAC 6.1 and 327 IAC 7. 327 IAC 7.1.**
- (3) Confined feeding control activities regulated by ~~IC 13-18-10~~ **under 327 IAC 16.**
- (4) Wastewater discharge activities regulated by **under rules of the water pollution control board at 327 IAC 5.**
- (5) Solid waste management activities regulated by **under 329 IAC 11.**
- (6) Disposal of ~~saw dust which is derived from processing untreated natural wood~~ **uncontaminated and untreated natural growth solid waste including tree limbs, stumps, leaves, and grass clippings.**
- (7) ~~The Disposal of coal ash, transported by water, into an ash pond which has received a water pollution control facility construction permit under 327 IAC 3~~ **saw dust derived from processing untreated natural wood.**
- (8) ~~The operation of surface impoundments; however, the final disposal of solid waste in such facilities at the end of their operation is subject to approval by the commissioner except as excluded under subdivisions (7) and (9):~~ **disposal of coal ash, transported by water, into an ash pond which has received a water pollution control facility construction permit under rules of the water pollution control board at 327 IAC 3.**
- (9) ~~The disposal of coal ash at a site receiving a total of less than one hundred (100) cubic yards per year from generators who each produce less than one hundred (100) cubic yards per year:~~ **operation of surface impoundments; however, the final disposal of solid waste in such facilities at the end of their operation is subject to**

**approval by the commissioner except as excluded under subdivisions (8) and (10).**

~~(10) Uses and~~ **The disposal of coal waste as exempted from regulation in ~~IC 13-19-3~~; ash at a site receiving a total of less than one hundred (100) cubic yards per year from generators who each produce less than one hundred (100) cubic yards per year.**

~~(11) The legitimate use of iron and steelmaking slags including the use as a base for road building, but not including use for land reclamation except as allowed under subdivision (13):~~ **uses and disposal of coal waste as exempted under IC 13-19-3-3.**

~~(12) The legitimate use of foundry sand which has been demonstrated to the satisfaction of the commissioner as suitable for restricted waste site type IH under the provisions of 329 IAC 10-9-4, including the use as a base for road building, but not including use for land reclamation except as allowed under subdivision (13):~~ **Activities concerning wastes containing polychlorinated biphenyls (PCBs) regulated under 329 IAC 4.1.**

~~(13) Other uses of solid waste may be approved by the commissioner if the commissioner determines them to be legitimate uses that do not pose a threat to public health and environment.~~ **Storage, transportation and processing of used oil as regulated under 329 IAC 13.**

~~(14) The legitimate use of slag under IC 13-19-3-8.~~ **(15) The legitimate use of foundry sand under IC 13-19-3-7, but not including use for land reclamation except as allowed under subdivision 16.**

~~(15) The legitimate use of foundry sand under IC 13-19-3-7, but not including use for land reclamation except as allowed under subdivision 16.~~ **(16) Any other use of solid waste approved by the commissioner based on the commissioner’s determination that the use is a legitimate use that does not pose a threat to public health or the environment.**

~~(16) Any other use of solid waste approved by the commissioner based on the commissioner’s determination that the use is a legitimate use that does not pose a threat to public health or the environment.~~

*(Solid Waste Management Board; 329 IAC 10-3-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1795; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2749; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3771)*

SECTION 37. 329 IAC 10-3-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-3-3 Insignificant facility modifications**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-14; IC 13-30; IC 36-9-30

Sec. 3. (a) A permittee of a solid waste land disposal facility proposing insignificant facility modifications may not be required to apply for a minor or a major modification of the current permit from the commissioner. See the definition of insignificant facility modification at ~~329 IAC 10-2-97.1~~; **329 IAC 1.**

(b) If a permittee proposes or is required to make an insignificant facility modification described in ~~329 IAC 10-2-97.1(1), through 329 IAC 10-2-97.1(2), 329 IAC 10-2-97.1(3), 329 IAC 10-2-97.1(4), and 329 IAC 10-2-97.1(5), 329 IAC 10-2-97.1(6), through 329 IAC 10-2-97.1(7), 329 IAC 10-2-97.1(8), 329 IAC 10-2-97.1(9), or 329 IAC 10-2-97.1(10),~~ the permittee shall provide notice to the commissioner ~~via certified mail~~ no later than seven (7) calendar days after the modification has been made. The notice shall include a detailed description of the project and the date the project was or is expected to be completed.

(c) If the permittee proposes to make an insignificant facility modification described in ~~329 IAC 10-2-97.1(5); 329 IAC 10-2-97.1(11), or 329 IAC 10-2-97.1(12),~~ **329 IAC 10-2-97.1(13), 329 IAC 10-2-97.1(14), or 329 IAC 10-2-97.1(15)** the permittee shall submit documentation of the proposed insignificant facility modifications to

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the commissioner ~~via certified mail~~. The documentation must include a detailed description of the proposed project.

(d) If the commissioner determines that the modification under subsection (c) is a major or minor modification, the permittee will be notified in writing within thirty (30) days after receipt of the information to the commissioner that the permittee must submit an application for a minor or major modification to the current permit.

(e) If the permittee does not receive notification from the commissioner within thirty (30) days after submission of the proposed modifications to the commissioner, the permittee may initiate the insignificant facility modifications in accordance with documentation provided to the commissioner.

(f) No permit modification shall be required for insignificant facility modifications made under this subsection to:

(1) correct operational violations under this article; or

(2) protect human health and the environment.

*(Solid Waste Management Board; 329 IAC 10-3-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1795; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2749; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3776; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 38. 329 IAC 10-6-4 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-6-4 Remedial action

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

Affected: IC 13-25-4-7; IC 13-25-4-8; IC 36-9-30

Sec. 4. If the commissioner determines that the closed solid waste land disposal facility is or may be a threat to human health or the environment, due to a release **or threat of release** of contaminants from the solid waste land disposal facility into the environment, the commissioner may proceed under IC 13-25-4 and rules adopted under IC 13-25-4-7 that require the owner, operator, or permittee of a closed solid waste land disposal facility or the owner of real estate upon which a closed solid waste land disposal facility is located, or any other responsible person under IC 13-25-4-8, to perform remedial action, including the installation and monitoring of ground water monitoring wells or other devices **and corrective action under 329 IAC 10-21-13**.  
*(Solid Waste Management Board; 329 IAC 10-6-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1798; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2751; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3778)*

SECTION 39. 329 IAC 10-10-1 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-10-1 Applicability

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

Affected: IC 13-30-2; IC 36-9-30

Sec. 1. (a) Unless otherwise addressed in this rule, all MSWLFs and new and existing MSWLF units must comply with applicable requirements in this article after the effective date of this article.

(b) ~~Within one hundred twenty (120) days following the effective date of this rule, the owner, operator, or permittee of a MSWLF permitted under 329 IAC 1-5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996, shall submit any necessary permit modification applications to comply with the requirements of this article. The owner, operator, or permittee of an MSWLF shall submit any necessary permit modification applications to comply~~

**with this article as effective on January 30, 2003, by March 10, 2003.** *(Solid Waste Management Board; 329 IAC 10-10-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1807; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3763)*

SECTION 40. 329 IAC 10-10-2 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-10-2 Pending applications

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3

Affected: IC 13-14; IC 13-20; IC 36-9-30

Sec. 2. A permit application:

(1) that is received on or before ~~June 21, 1995~~, **the date of preliminary adoption** will not be required to be revised to meet the requirements of this article; ~~however, the application must comply with 329 IAC 2, which was repealed in 1996, and applicable federal requirements; or~~

(2) that is received after ~~June 21, 1995~~, **the date of preliminary adoption** will be required to comply with all applicable requirements of this article **as effective on January 30, 2003**.

*(Solid Waste Management Board; 329 IAC 10-10-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1807; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2751)*

SECTION 41. 329 IAC 10-11-2.1 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-11-2.1 Permit application requirements; general

Authority: IC 13-14-8-7; IC 13-15-2-1

Affected: IC 4-21.5-3-5; IC 13-14-11-3; IC 13-20-21; IC 36-7-4; IC 36-9-30

Sec. 2.1. (a) An application for any solid waste land disposal facility permit, including renewals, or for a modification to a solid waste land disposal facility permit, excluding insignificant modifications, must be submitted to the commissioner on permit application forms provided by the commissioner, in a format specified by the commissioner. All narrative, plans, and other support documentation accompanying the application must also be submitted in a format specified by the commissioner.

(b) A complete application must include all of the following information:

(1) The name and address of the applicant.

(2) The name and address of the solid waste land disposal facility site.

(3) The name and address of the solid waste land disposal facility owner, operator, or permittee if different from the real property owner.

(4) The names and addresses of members of the board of county commissioners of a county that is affected by the permit application.

(5) The names and addresses of the mayors of any cities that are affected by the permit application.

(6) The names and addresses of the presidents of town councils of any towns that are affected by the permit application.

(7) The legal description as defined in 329 IAC 10-2-104 for the following:

(A) The solid waste land disposal facility ~~boundaries~~: **boundary**.

(B) If applicable, the solid waste boundary defining the area where the solid waste is to be deposited.

(C) Sufficient documentation must be provided to verify that the waste deposition area is located within the facility boundaries. Documentation must include a map of the legal description for these areas certified by a registered land surveyor.

(8) Solid waste land disposal facility information, including the following:

- (A) A description of the type of operation.
- (B) The **planned or remaining** life of the solid waste land disposal facility in years.
- (C) The expected ~~volume~~ **amount** of waste to be received in tons per operating day ~~and~~ **or** cubic yards per operating day.
- (D) The type of waste to be received.

(9) Signatures and certification statements in compliance with section 3 of this rule.

**(10) Disclosure of all good character requirements as described in IC 13-19-4, except for a minor modification.**

(c) Five (5) copies of the completed application and all supporting documentation must be submitted to the commissioner as follows:

- (1) Sent by registered mail, certified mail, **private carrier**, or delivered in person.
- (2) In addition to the paper copies, a copy of the completed application and all supporting documentation may be submitted ~~on digital media by electronic submission~~, the type and format of which will be prescribed by the department.
- (3) Plans and documentation accompanying the application shall be submitted as required in 329 IAC 10-15-1(c).

**(4) Documentation submitted to the department as required by this article, may be in an electronic format as prescribed by the commissioner. Any documentation submitted in an electronic format also must be submitted as a paper copy or copies as required by this article.**

(d) Confidential treatment of information may be requested in accordance with ~~the rules of the solid waste management board~~ **329 IAC 6.1 for all or a portion of the permit application and supporting documents.**

(e) All corporations must submit a copy of the certificate of existence signed by the secretary of state.

(f) Fees must be submitted with the application in accordance with IC 13-20-21. (*Solid Waste Management Board; 329 IAC 10-11-2.1; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3788*)

SECTION 42. 329 IAC 10-11-2.5 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-11-2.5 Permit application for new land disposal facility and lateral expansions**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 4-21.5-3-5; IC 13-14-11-3; IC 13-20-21; IC 14-4-5; IC 36-7-4; IC 36-9-30

Sec. 2.5. (a) In addition to the application requirements given at section 2.1 of this rule, a complete application for a solid waste land disposal facility permit or for a major modification of a solid waste land disposal facility permit for a lateral expansion must include all the following information:

- (1) Detailed plans and design specifications as required by:
  - (A) 329 IAC 10-15 through 329 IAC 10-19 and 329 IAC 10-22, as applicable;
  - (B) 329 IAC 10-24 through 329 IAC 10-27 and 329 IAC 10-30, as applicable; or
  - (C) 329 IAC 10-32 through 329 IAC 10-35 and 329 IAC 10-37, as applicable.
- (2) Closure and post-closure plans as required by:

- (A) 329 IAC 10-22-2 and 329 IAC 10-23-3, as applicable;
- (B) 329 IAC 10-30-4 and 329 IAC 10-31-3, as applicable; or
- (C) 329 IAC 10-37-4 and 329 IAC 10-38-3, as applicable.

(3) The detailed plans and design specifications required by subdivision (1) and the closure and post-closure plans required by subdivision (2) must be certified by a registered professional engineer and must be properly titled.

(4) A description of the financial instrument that will be used to achieve compliance with financial responsibility provisions of 329 IAC 10-39.

(5) Documents necessary to establish ownership or other tenancy, such as an option to purchase, of the real estate upon which the solid waste land disposal facility to be permitted is located. The documentation must include a certified copy of the deed to the subject real estate showing ownership in the person identified as the owner in the application or the deed and evidence satisfactory to the commissioner that ownership will be transferred to the proper person for purposes of this rule, if not already done, prior to operation of the solid waste land disposal facility.

(6) Documentation that proper zoning approvals have been obtained, including the following, if applicable:

- (A) A copy of the zoning requirements, if any, for solid waste facilities in the area where the solid waste land disposal facility is to be located.
- (B) A copy of the improvement location permit or occupancy permit issued by the zoning authority having jurisdiction for the site, if a solid waste land disposal facility is permitted by the zoning ordinance in the area where the solid waste land disposal facility is to be located.
- (C) A copy of the amendment to the zoning ordinance adopted under IC 36-7-4-901 et seq. if a change in the zone maps is required for the area where the solid waste land disposal facility is to be located.
- (D) A copy of the amendment to the zoning ordinance adopted under IC 36-7-4-901 et seq. if such amendment is required for the area where the solid waste land disposal facility is to be located.
- (E) A copy of the variance, special exception, special use, contingent use, or conditional use approved under IC 36-7-4-921 et seq. if such approval is required for the area where the solid waste land disposal facility is to be located.
- (F) The status of any appeal of any zoning determination as described in clauses (B) through (E), and if none is pending, the date by which the appeal must be initiated.

(7) A United States Geological Survey topographical quadrangle map seven and one-half (7½) minute, or equivalent, to include all areas within two (2) miles of the proposed facility boundaries with property boundaries and proposed solid waste boundaries clearly delineated.

(8) Documentation of the base flood elevation within one-fourth (¼) mile of the proposed facility boundaries. Either of the following forms of documentation are acceptable:

- (A) A letter from the department of natural resources.
- (B) A national flood insurance program map.

(9) A scaled map that depicts the following features, **(please note if none exist)**, which are known to the applicant or are discernable from public records, on and within one-half (½) mile of the proposed facility boundaries:

- (A) Airports.
- (B) Buildings.
- (C) City, township, county, state, or national forests or parks.
- (D) Coal borings.
- (E) Culverts.

- (F) Drainage tiles.
- (G) Dwellings.
- (H) Fault areas.
- (I) Floodplains, **floodway fringes, and floodways.**
- (J) Gas or oil wells.
- (K) Hospitals.
- (L) Legal drains.
- (M) Nature preserves regulated under IC 14-4-5 or any critical habitats ~~regulated under 50 CFR 17~~ **as contained in 50 CFR 17.95 or 50 CFR 17.96.**
- (N) Pipelines.
- (O) Power lines.
- (P) Roads.
- (Q) Schools.
- (R) Sewers.
- (S) Sinkholes.
- (T) Springs and seeps.
- (U) Surface or underground mines.
- (V) Swamps.
- (W) Water courses or surface water, including reservoirs.
- (X) Wells.
- (Y) Wetlands.

**(10) Potential areas where storm water may enter ground water, such as abandoned wells or sinkholes. Please note if none exist.**

**(11) Locations of specific points where storm water discharge will leave the facility boundary.**

**(12) Name of all receiving waters of the storm water discharge within a one (1) mile radius beyond the facility boundary. If the discharge is to a separate municipal storm sewer, identify the name of the municipal operator and the ultimate receiving water of the storm water discharge.**

~~(10)~~ **(13)** A soil map and related description data as published by the United States Department of Agriculture, Natural Resources Conservation Service.

**(14) Current United States Geological Survey (USGS) hydrologic unit code (up to fourteen (14) digits).**

~~(11)~~ **(15)** Well logs and a topographic map indicating the location and identifying with respect to the drilling logs, all wells within one (1) mile of the proposed facility boundaries that are on file with the department of natural resources.

~~(12)~~ **(16)** A survey must be conducted for any residences or occupied buildings within one-fourth (1/4) of a mile of the proposed facility boundaries that do not have a well log. The survey is to determine whether wells that do not have well logs on file with the department of natural resources are present and obtain any information regarding these wells. A summary of the results of the survey and any information gained must be included with the application.

~~(13)~~ **(17)** The name and address of all owners or last taxpayers of record of property:

- (A) located within one (1) mile of the proposed solid waste boundaries of a solid waste land disposal facility; and
- (B) of adjoining land that is within one-half (1/2) of a mile of the solid waste boundary.

~~(14)~~ **(18)** A signed affidavit to the department agreeing to notify adjoining land owners as required in 329 IAC 10-12-1(b)(1).

~~(15)~~ **(19)** The following information relative to wetlands under 329 IAC 10-16-3 and other waters ~~of the state~~ **as defined under IC 13-11-2-265:**

- (A) A copy of the U.S. Army Corps of Engineers Section 404 of the Clean Water Act permit and a copy of the Indiana department of environmental management Section 401 water quality certifica-

tion or documentation acceptable to the department that a Section 404 and Section 401 water quality certification are not required. (B) Any other mitigation plans required by any other government agency including permit conditions or restrictions placed on the siting of the solid waste land disposal facility in relationship to any other waters ~~of the state~~ **as defined by 329 IAC 10-2-205 under IC 13-11-2-265.**

(b) Restricted waste site Type III and construction/demolition landfills are exempt from submitting the information required in subsection (a)(9). (*Solid Waste Management Board; 329 IAC 10-11-2.5; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3789*)

SECTION 43. 329 IAC 10-11-5.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-11-5.1 Renewal permit application**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3

Affected: IC 13-20-21; IC 36-9-30

Sec. 5.1. (a) In addition to the application requirements given at section 2.1 of this rule, **excluding section 2.1(c)(3) of this rule**, a complete application for a renewal of a solid waste land disposal facility permit must include all the following information:

(1) The name and address of all owners or last taxpayers of record of property of adjoining land that is within one-half (1/2) mile of the solid waste boundary.

(2) The operation permit number of the solid waste land disposal facility.

~~(3) The legal description of the solid waste land disposal facility location as defined in 329 IAC 10-2-104. The number of acres permitted for waste disposal.~~

~~(4) Facility information, including the following:~~

- ~~(A) A description of the type of operation under 329 IAC 10-9-1.~~
- ~~(B) The number of acres permitted for waste disposal.~~
- ~~(C) The remaining life of the solid waste land disposal facility in years.~~
- ~~(D) The volume of waste received at the solid waste land disposal facility in cubic yards per operating day or tons per operating day.~~
- ~~(E) The type of waste received at the solid waste land disposal facility.~~

~~(5)~~ **(4)** A topographic plot plan that reflects the current condition of the solid waste land disposal facility and current elevations taken within ~~six (6)~~ **twelve (12)** months of the submittal of the application and accurately identifying the following information to a scale as required by 329 IAC 10-15-2(a), 329 IAC 10-24-2(a), or 329 IAC 10-32-2(a):

- (A) Areas of final cover, grading, and seeding.
- (B) Filled areas lacking final cover, grading, and seeding.
- (C) Current areas of operation, including depth of waste fill.
- (D) Projected solid waste disposal areas on a per year basis for the next five (5) years.

~~(6) Signatures and certification statements in compliance with section 3 of this rule.~~

**(5) A copy of the latest approved final contour plot plan with scale, as required by 329 IAC 10-15-2(a).**

**(6) A copy of the latest approved subgrade contours or the uppermost contour of the soil liner.**

(b) An application for a renewal of a solid waste land disposal facility permit must be submitted at least one hundred twenty (120) days prior to the expiration date of the permit or the permit will be invalid upon expiration.

(c) Fees must be submitted with the application in accordance with IC 13-20-21. (*Solid Waste Management Board; 329 IAC 10-11-5.1; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3791*)

SECTION 44. 329 IAC 10-11-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-11-6 Minor modification applications**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3; IC 13-20-1  
 Affected: IC 13-20-1; IC 13-21-5; IC 36-9-30

Sec. 6. (a) In addition to the application requirements given at section 2.1 of this rule, **for a minor modification of a solid waste facility permit, excluding section 2.1(b)(10) of this rule**, adequate information must be included in an application for a minor modification of a solid waste land disposal facility permit to demonstrate that the minor modification will be protective of human health and the environment. The commissioner shall determine the information adequate based on the type of minor modification requested by the facility.

(b) In addition to any requirements in subsection (a), the application must also include the name and address of all owners or last taxpayers of record of property of adjoining land that is within one-half (½) mile of the solid waste boundary.

(c) Fees must be submitted with the application in accordance with IC 13-20-21.

**(d) Borrow pits owned by the facility and not permitted by the department on the latest effective date of this section, must be included in the facility permit through application for minor modification on application forms provided by the commissioner. This requirement only includes a borrow pit:**

- (1) owned by the facility;
- (2) not previously permitted by the department on the latest effective date of this section; and
- (3) located on-site or on property adjoining the facility.

(*Solid Waste Management Board; 329 IAC 10-11-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1812; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2755; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3791*)

SECTION 45. 329 IAC 10-11-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-11-7 Demonstration and determination of need requirements**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3; IC 13-20-1  
 Affected: IC 13-20-1; IC 13-21-5; IC 36-9-30

Sec. 7. (a) This section applies to all permits for new solid waste land disposal facilities or major modifications of permits submitted after March 20, 1990, except those solid waste land disposal facilities exempt under IC 13-20-1.

(b) In accordance with subsection (a) and in addition to other permit application requirements outlined in this article, the following are also required:

- (1) A description of the anticipated area that would be served by the solid waste land disposal facility as indicated by the following:
  - (A) Solid waste management districts or portions of districts.
  - (B) A county, multiple counties, or portions of counties.
  - (C) A county or multiple counties and the state if the area includes portions outside of Indiana.

(2) A description of the existing solid waste facilities that serve the same described area.

(3) A description of the need that would be fulfilled by constructing the proposed solid waste land disposal facility, as follows:

(A) If the solid waste land disposal facility is proposed in areas with approved district solid waste management plans, a description of the need identified in the district solid waste management plan required by IC 13-21-5.

(B) If the solid waste land disposal facility is proposed in areas without approved district solid waste management plans, a description of the need for the proposed area to be served.

(4) A description of recycling, composting, or other activities that the solid waste land disposal facility would operate within the proposed area of service.

(5) A description of the additional disposal capacity that the solid waste land disposal facility, if permitted, would provide for the proposed area of service.

(6) Additional information as requested by the commissioner.

(c) This application requirement is satisfied if it is determined that the capacity applied for is reasonably related to the need shown based upon:

- (1) average or representative annual existing disposal volumes for the solid waste land disposal facility, multiplied by twenty (20) years;
- (2) twenty (20) year solid waste disposal projections in approved solid waste district plans for each solid waste management district identifying the solid waste land disposal facility as a facility to be used by the district;
- (3) a shortfall in capacity as shown by the twenty (20) year solid waste plan for the solid waste management district in which the solid waste land disposal facility is located; or
- (4) any combination of the criteria listed in this subsection.

(d) The commissioner shall review the submitted application and the accompanying materials in accordance with provisions of this article. If it is determined that there is not a local or regional need in Indiana for the solid waste land disposal facility, the commissioner shall deny the permit application. (*Solid Waste Management Board; 329 IAC 10-11-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1812; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2755; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3792*)

SECTION 46. 329 IAC 10-12-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-12-1 Public process for new solid waste land disposal facility permits, and major permit modifications and minor permit modifications**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3; IC 13-20-1  
 Affected: IC 5-3-1-2; IC 5-3-1-6; IC 5-3-2; IC 13-15-3-3; IC 13-20; IC 36-9-30

Sec. 1. (a) A person submitting an affidavit as required by 329 IAC 10-11-2.5(a)(~~13~~) (20) and an application for one (1) of the following shall make notice as required in subsection (b):

- (1) A new solid waste land disposal facility permit.
- (2) A major modification for a lateral expansion permit **or a vertical expansion permit**.
- (3) A minor modification permit ~~under 329 IAC 10-2-112(a)(2)~~ **for a lateral expansion that would not:**
  - (A) **increase the facility's permitted capacity to dispose of solid waste by the lesser of:**
    - (i) **more than ten percent (10%); or**
    - (ii) **five hundred thousand (500,000) cubic yards; or**



**(B) in a lateral expansion, increase the area within the permitted solid waste boundary by more than one (1) acre.**

(b) The notice required by subsection (a) must include the following:  
(1) Not more than ten (10) working days after submitting an application, an applicant shall make a reasonable effort to notify the owners of record of adjoining land to the solid waste land disposal facility or proposed solid waste land disposal facility.

(2) The notice provided by the applicant in this subsection must:  
(A) be in writing;  
(B) include the date on which the application for the permit was submitted to the department; and  
(C) include a brief description of the subject of the application.

(c) A public meeting must be conducted by the applicant submitting an application for the following:

(1) A new solid waste land disposal facility permit.  
(2) A major modification to a solid waste land disposal facility permit.

(d) The applicant shall complete the following for the public meeting as required in subsection (c):

(1) Within sixty (60) days after the date the applicant received notification from the commissioner that the application has been deemed complete, conduct a public meeting in the county where the solid waste land disposal facility or major modification designated in the application ~~is~~ **will be** located.

(2) Publish notice of the public meeting ~~required in subdivision (1)~~ at least ten (10) days prior to the meeting in a newspaper of general circulation in the county where the solid waste land disposal facility or major modification will be located. The notice must:

(A) be at least two (2) columns wide by five (5) inches long;  
(B) not be placed in the part of the newspaper where the legal notices and classified advertisements appear;  
(C) include the time and date of the public meeting;  
(D) state the exact place of the public meeting; and  
(E) have every effort made by the applicant and the department to coordinate the publication date of the notice of the public meeting held by the applicant as required by this subdivision with the publication date of the notice of public hearing held by the department as required in subsection (i)(1).

(3) Conduct the public meeting as follows:

(A) Present a brief description of the location and operation of the proposed solid waste land disposal facility or major modification.  
(B) Indicate where copies of the application have been filed.  
(C) If the applicant proposes a design alternative, the applicant must briefly describe the alternative design.  
(D) State that the department will accept written comments and questions from the public on the permit application and announce the address of the department and name of the person accepting comments on behalf of the department.  
(E) Provide fact sheets on the proposed solid waste land disposal facility or major modification that have been prepared by the department for the public. A department representative shall attend the meeting.  
(F) Offer the opportunity for public comments and questions.

(e) Within five (5) days after the date the applicant received notification from the commissioner that the application has been deemed complete by the department, the applicant shall place a copy of the complete application and any additional information that the department requests at a library in the county where the solid waste land disposal facility or major modification will be located.

(f) The applicant shall pay the costs of complying with subsections (c) through (e).

(g) Failure of the applicant to comply with subsections (c) through (f) may result in the denial of the application by the department.

(h) Public notice must be made by the department as required by IC 5-3-1-2(h) after the date the applicant received notification from the commissioner that the permit application is deemed completed. The public notice must meet the following requirements:

(1) Indicate where copies of the application are available for public review.  
(2) State that the department will accept comments from the public on the application for at least thirty (30) days.  
(3) Offer the opportunity for a public hearing on the application.  
(4) The department shall publish the notice in accordance with IC 5-3-1-6.  
(5) If the facility boundary of the proposed solid waste land disposal facility ~~is~~ or major modification, if also a lateral expansion, will be within one (1) mile of the county boundary, the department will publish the notice in accordance with IC 5-3-1-6 in the adjacent county.  
(6) In addition to the requirements in IC 5-3-1-6, the department shall publish the notice in two (2) newspapers in the county where the solid waste land disposal facility or major modification is located, if there are two (2) newspapers of general circulation in the county.

(i) The department shall hold a public hearing ~~as if~~ required by IC 13-15-3-3. The following apply to a public hearing:

(1) The department shall publish notice of the hearing as required in IC 5-3-1 and IC 5-3-2 in newspapers of general circulation in the county where the solid waste land disposal facility (if a major modification) or proposed solid waste land disposal facility is located.  
(2) During a hearing, a person may testify within the time provided or submit written comments, or both. The department will consider testimony that is relevant to the requirements of IC 13 and this article.

*(Solid Waste Management Board; 329 IAC 10-12-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1812; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2756; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3792)*

SECTION 47. 329 IAC 10-13-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-13-1 Issuance procedures; original permits**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-11; IC 13-12; IC 13-13; IC 13-14-8; IC 13-16; IC 13-17; IC 13-19; IC 13-20; IC 13-21; IC 13-22; IC 13-23; IC 13-24; IC 13-25; IC 13-26; IC 13-27; IC 13-27.5; IC 13-29; IC 13-30-2; IC 36-9-30

Sec. 1. (a) The department shall comply with the procedural requirements of IC 13-15-3, IC 13-15-5, and IC 13-15-6 pertaining to public notice, public comment, and public hearing for an application for ~~an a~~ **original** permit for a solid waste land disposal facility regulated under IC 13-19-3.

(b) Subject to the provision of 329 IAC 10-11-1(c), if the department determines that the permit application meets the requirements of this article, and that the solid waste land disposal facility will be constructed and operated in accordance with the requirements of this article and the applicant is otherwise in compliance with the environ-

mental statutes of Indiana, the permit will be granted. The department may impose such conditions in a permit as may be necessary to:

- (1) comply with the requirements of this article, IC 13-11 through IC 13-30, and IC 36-9-30; or
- (2) protect the public health and the environment.

(c) The notice of the granting of a permit must state that the permit will not become effective until

- (1) ~~all financial responsibility documents have been executed and delivered to the department in the form and amount specified; and~~
- (2) the completion and execution of any real estate transfers necessary to vest legal title of the real estate upon which the permitted activity is to occur in the name of the owner listed on the application have been completed, executed, and such documentation necessary to evidence such transfer has been recorded and delivered to the department, or proof of the applicant's agreement regarding the leasing of this property has been submitted to the department.

(d) Notwithstanding subsection (c), a variance granted under IC 13-14-8 must not be transferred to another person without independent proof of undue hardship or burden by the person seeking transfer. (*Solid Waste Management Board; 329 IAC 10-13-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1814; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2757; errata filed Jun 10, 1998, 9:23 a.m.: 21 IR 3939; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3793*)

SECTION 48. 329 IAC 10-13-5 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-13-5 Transferability of permits**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-15-7; IC 13-30-6; IC 36-9-30-35

Sec. 5. (a) A permit may be transferred to a third person by the permittee without the need for a new permit or modification or revocation of the existing permit being required if:

- (1) the permittee notifies the commissioner of the proposed transfer at least sixty (60) days before the proposed date of transfer on forms provided by the commissioner;
- (2) a written contract between the permittee and the third person containing a specific date of transfer of permit responsibility is submitted to the commissioner;
- (3) the transferee has not been convicted under IC 13-30-6 or IC 36-9-30-35;
- (4) the commissioner has not revoked under IC 13-15-7 a permit to the transferee that was issued under:
  - (A) this article;
  - (B) 329 IAC 1.5, which was repealed in 1989; or
  - (C) 329 IAC 2, which was repealed in 1996;

- (5) the third person is, at the time of the application or permit decision, in compliance with the Environmental Protection Acts and regulations promulgated thereunder and does not have a history of repeated violations of the Acts or regulations or material permit conditions that evidence an inability or unwillingness to comply with requirements of this article or a facility permit;
- (6) the transferee provides proof **to the department** of financial responsibility under 329 IAC 10-39; and
- (7) the transferee provides proof **to the department** that ~~it the transferee~~ is, or will be, the owner of the real property or provides proof of the applicant's agreement regarding the leasing of the property. ~~to the department.~~

(b) The transfer will be effective on the specific date of transfer

provided by the permittee unless the commissioner notifies the permittee and the transferee that the transfer will be denied.

(c) Notwithstanding the transfer of a permit, a variance must not be transferred to another person. (*Solid Waste Management Board; 329 IAC 10-13-5; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1815; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2758*)

SECTION 49. 329 IAC 10-13-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-13-6 Permit revocation and modification**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 4-21.5-3; IC 13-15-7-1; IC 36-9-30

Sec. 6. (a) The commissioner may revoke or modify a permit issued under this article if cause exists under IC 13-15-7-1 and may request an updated application if necessary. When a permit is modified, only the conditions ~~subject to modifications~~ **modified** are reopened and subject to review under ~~IC 13-15-7 and IC 4-21.5-3-7~~ **IC 13-15-7-3**. If a permit is revoked, the entire permit is reopened and subject to revision and if the permit is reissued, it may be for a new term.

(b) ~~The commissioner may revoke a permit if the permit applicant is found by the department to have knowingly or intentionally falsified or supplied inaccurate information.~~ If the solid waste land disposal facility is located in an area that is not suitable for the placement of waste as specified by this article, the department shall consider the nonsuitability issue as a sufficient basis for denying the modification or for revoking the permit unless the permittee demonstrates to the department that continued use of the solid waste land disposal facility will not pose a threat to human health or the environment.

(~~+~~) (c) To request a change in the solid waste land disposal facility plans or operation, the permittee must request that the commissioner modify the permit before any permitted changes are made in the approved plans. The application must provide the rationale for such modification to the commissioner for review. If the commissioner determines that the requested modification is consistent with ~~the standards established in~~ this article, the commissioner shall grant the modification. Only the conditions ~~subject to modifications~~ **modified** are reopened. The commissioner shall give notice to the permittee of the determination on the modification in accordance with ~~IC 13-15-7 and IC 4-21.5-3-7~~ **IC 4-21.5-3**.

(~~+~~) (d) Other than for minor modifications, requests to modify a permit to increase the permitted acreage of the solid waste disposal area of a solid waste land disposal facility shall be processed in accordance with section 1 of this rule. (*Solid Waste Management Board; 329 IAC 10-13-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1815; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2758; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3794*)

SECTION 50. 329 IAC 10-14-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-14-1 Quarterly reports**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 24-6; IC 36-9-30

Sec. 1. (a) A quarterly tonnage report of solid waste received at the solid waste land disposal facility must be submitted to the commissioner by the owner, operator, or permittee of that facility.

(b) The report required by subsection (a) must be submitted on or before the fifteenth day of the month immediately following the end of the calendar quarter being reported. If the submittal date falls on a Saturday, a Sunday, or a national or state legal holiday, the submittal date will be the next day that is not a Saturday, a Sunday, or a national or state legal holiday.

(c) The report required by subsection (a) must be submitted by the owner, operator, or permittee of the solid waste land disposal facility that is open to accept solid waste for disposal unless the owner, operator, or permittee of the solid waste land disposal facility has ceased accepting solid waste for a period of at least one (1) calendar quarter, and has sent written notification to the commissioner indicating the initiation of final closure under 329 IAC 10-22-4, 329 IAC 10-30-6, or 329 IAC 10-37-6 as appropriate.

(d) The solid waste hauler shall provide the owner, operator, or permittee of the solid waste land disposal facility with the origin of the solid waste delivered to the solid waste land disposal facility. The hauler shall estimate, by percent, the type and amount of solid waste originating in each county and state, or country if other than the United States, if the load contains solid waste from more than one (1) county, state, or country.

(e) The owner, operator, or permittee of the solid waste land disposal facility shall submit the quarterly tonnage report required by subsection (a) as follows:

(1) ~~On~~ **In** the most current paper report form ~~or electronic submittal format~~ prescribed by the ~~department~~ **commissioner**. The owner, operator, or permittee may obtain a quarterly tonnage report form from the department. The form:

(A) may be photocopied **or electronically copied** by the owner, operator, or permittee of the solid waste land disposal facility;

(B) in its most current format, may be computer generated by the owner, operator, or permittee of the solid waste land disposal facility.

(2) The original of each paper report must be signed by the solid waste land disposal facility owner, operator, or permittee as certification of report accuracy.

(3) Each report must be accurate, legible, and complete.

~~(4) One (1) additional paper copy of each original paper report must be submitted with the original paper report required in subdivision (6):~~

~~(5) In addition to the paper report required in subdivision (1), an electronic report in a format approved by the commissioner may also be submitted:~~

~~(6) (4) The paper report and any approved format~~ required by this subsection must **meet the requirements of 329 IAC 10-1-4, as applicable, and must** include at least the following information:

(A) The weight in total tons of solid waste received at the solid waste land disposal facility for that calendar quarter compiled by waste type and origin.

(B) The county and state in which the solid waste originated. If the solid waste originated outside of the United States, the country must be designated. The origin must be provided to the solid waste land disposal facility by the solid waste hauler as described in subsection (d).

(C) The type, total weight in tons, and final destination of solid waste diverted from disposal for reuse or recycling after being received at the solid waste land disposal facility.

~~(D) The estimated remaining disposal capacity, in cubic yards, that is calculated by subtracting the existing fill volume as determined by the contour map required by 329 IAC 10-20-8(a)(6) from the design capacity:~~

~~(E) The estimated remaining solid waste land disposal facility life, in years, for the remaining disposal capacity:~~

~~(F) (D) Waste types, including the following:~~

- (i) Municipal solid waste.
- (ii) Construction/demolition waste.
- (iii) ~~Special Foundry~~ waste.
- (iv) ~~Coal ash~~.
- (v) ~~Flue gas desulfurization wastes~~.
- (vi) Other solid waste.

(f) If the owner, operator, or permittee of the solid waste land disposal facility ascertains that there is an error in any report previously submitted as required by subsection (a), a revised report reflecting the correct information must be submitted in the same format as the original submission. The revised report must:

(1) have "Amended" written or typed at the top of each page of the resubmitted report; and

(2) be submitted before or with the submission of the next quarterly tonnage report after ascertaining an error.

(g) Copies of reports required by this section must be:

(1) maintained on-site by the solid waste land disposal facility owner, operator, or permittee for three (3) years after the submittal date of the report; and

(2) made available during normal operating hours for on-site inspection and photocopying **or electronic copying** by a representative of the department.

(h) The solid waste land disposal facility owner, operator, or permittee shall maintain the documentation on-site to substantiate reports required by this section. Such documentation must be:

(1) maintained by the solid waste land disposal facility owner, operator, or permittee for three (3) years after the report's submittal date; and

(2) made available during normal operating hours for on-site inspection and photocopying **or electronic copying** by a representative of the department.

(i) Failure to submit reports and copies as required by this section or maintain copies of reports and records as required by this section constitutes an operational violation under 329 IAC 10-1-2. (*Solid Waste Management Board; 329 IAC 10-14-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1815; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2759; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3795*)

SECTION 51. 329 IAC 10-15-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-15-1 General requirements**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 1. (a) A permit application for a new MSWLF or a lateral expansion must be accompanied by the following plans and documentation:

- (1) Plot plans as specified under section 2 of this rule.
- (2) Cross-sectional drawings and details as specified under section 3 of this rule.
- (3) A hydrogeologic site investigation report as specified under sections 4 and 5 of this rule.
- (4) An operational plan of the proposed MSWLF as specified under section 6 of this rule.
- (5) A CQA/CQC plan as specified under section 7 of this rule.

- (6) Calculations and analyses pertaining to MSWLF design as specified under section 8 of this rule.
- (7) An explosive gas management plan as specified under 329 IAC 10-20-17.
- (8) A closure plan as specified under 329 IAC 10-22-2.
- (9) A post-closure plan, as specified under 329 IAC 10-23-3.
- (10) A quality assurance project plan as specified under 329 IAC 10-21-2(b)(13).
- (11) A sampling and analysis plan as specified under 329 IAC 10-21-2.
- (12) A general description for developing a statistical evaluation plan as required by 329 IAC 10-21-6(c). The description must include a time frame for submitting the statistical evaluation plan.
- (13) If applicable, a baled waste management plan as specified under section 9 of this rule.
- (14) A leak detection plan as specified under section 10 of this rule.
- (15) A leachate collection contingency plan as specified under section 11 of this rule.
- (16) A storm water pollution prevention plan as specified under section 12 of this rule.**
- ~~(17)~~ **(17) Other plans as may be required by the commissioner.**

(b) Plans and documentation that accompany a permit application for a new MSWLF or a lateral expansion must be certified as follows:

- (1) The hydrogeologic site investigation report required in subsection (a)(3) must be certified by a certified professional geologist or a qualified ground water scientist, either of whom shall have educational or professional experience in hydrogeology or ground water hydrology.
- (2) With the exception of the hydrogeologic site investigation report and the sampling and analysis plan, all plans and documentation required in subsection (a) must be certified by a registered professional engineer.

(c) A full set of plans and documentation required by this section must accompany each of the five (5) copies of the permit application required in 329 IAC 10-11-2.1(c). ~~In addition to the paper copies, a copy of the plans and documentation required by this section may also be submitted on a computer diskette, the type and format of which will be prescribed by the department.~~

(d) All plans and documentation must be properly titled. (*Solid Waste Management Board; 329 IAC 10-15-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1817; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2760; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3797*)

SECTION 52. 329 IAC 10-15-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-15-2 Plot plan requirements**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

- Sec. 2. (a) Plot plans required by subsections (b) through (d) must:
- (1) use a scale of at least one (1) inch per one hundred (100) feet for a MSWLF of less than eighty (80) acres;
  - (2) use a scale of at least one (1) inch per two hundred (200) feet, for a MSWLF of eighty (80) acres to and including one hundred fifty (150) acres;
  - (3) use a scale of at least one (1) inch per three hundred (300) feet for an MSWLF greater than one hundred fifty (150) acres;
  - (4) include a bar scale on each drawing;
  - (5) include elevations that correlate with United States Geological Survey (USGS) mean sea level data;

- (6) include a north arrow; and
- (7) include a map legend.

(b) A permit application for a new MSWLF or a lateral expansion must be accompanied by an existing features plot plan that includes the facility boundary, and the solid waste boundary and indicates the presence or absence of each of the following features within three hundred (300) feet **outside** of the facility boundary:

- (1) Location and elevations of all existing boreholes.
- (2) Rock outcroppings.
- (3) Surface water run-off directions.
- (4) Fences.
- (5) Utility easements and rights-of-way.
- (6) Existing structures.
- (7) Benchmark descriptions.
- (8) Surface contours with intervals of no more than:
  - (A) two (2) feet if the MSWLF is less than eighty (80) acres; or
  - (B) five (5) feet if the MSWLF is equal to or greater than eighty (80) acres.
- (9) Real property boundary.

(c) The proposed final contour plot plan required by subsection (d)(1) must indicate surface contours of the MSWLF and three hundred (300) feet beyond the facility boundary. The contour intervals must be no more than:

- (1) two (2) feet if the MSWLF is less than eighty (80) acres; or
- (2) five (5) feet if the MSWLF is equal to or greater than eighty (80) acres.

(d) A permit application for a new MSWLF or a lateral expansion must be accompanied by plot plans showing the following:

- (1) Proposed final contours, indicating the following features that would remain after closure:
  - (A) Any buildings.
  - (B) Proposed drainage.
  - (C) Proposed sedimentation and erosion control structures.
  - (D) Proposed vegetation, fencing, and visual screening.
  - (E) Proposed roadways providing access to and around the site that are necessary for post-closure care and monitoring.
  - (F) Proposed berms, flood protection dikes, and surface water diversion structures.
  - (G) Proposed explosive gas monitoring and management system.
  - (H) Proposed solid waste boundary.
  - (I) Proposed monitoring wells.
- (2) Proposed leachate collection system, indicating the following:
  - (A) Proposed ~~soil liner top contour~~ **uppermost contour of the soil liner**.
  - (B) Piping layout.
  - (C) Cleanout and riser locations.
  - (D) Sump contours or elevations if applicable.
  - (E) Lift station locations if applicable.
  - (F) Leachate storage areas if applicable.

~~applicable:~~

- (3) Initial facility development plan and details, indicating the following:
  - (A) Proposed benchmarks.
  - (B) Proposed buildings and on-site transfer.
  - (C) Proposed drainage, including permanent sedimentation and erosion control structures, **including only details for temporary erosion structures**.
  - (D) Proposed explosive gas monitoring and management system.
  - (E) Proposed fencing and visual screening.

(F) Proposed on-site roads.

(G) Proposed ~~soil liner top contours~~: **uppermost contour of the soil liner.**

(H) ~~On-site~~ Borrow area for soil liner material and daily cover if applicable.

**(I) Delineation of other construction activities that will provide services for this project.**

(4) Operational plot plan indicating the sequence of cell development, and indicating the following:

(A) Additional proposed benchmarks, if applicable.

(B) Additional proposed buildings, if applicable.

(C) Additional drainage features and permanent erosion and sediment control features, **including only details for temporary erosion structures.**

(D) Additional fencing and visual screening.

(E) Proposed on-site roads.

(F) Direction of fill progression.

(5) Any other plot plan that may be determined to be required by the commissioner.

*(Solid Waste Management Board; 329 IAC 10-15-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1818; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3797)*

SECTION 53. 329 IAC 10-15-5 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-15-5 Description of proposed ground water monitoring well system**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 5. (a) The hydrogeologic site investigation report that accompanies permit applications for new MSWLFs and lateral expansions must contain a description of the proposed **ground water** monitoring well system that, at a minimum, includes the following information:

(1) Monitoring point locations, design, and installation procedures. Installation procedures must comply with 329 IAC 10-21-4.

(2) A thorough evaluation of the suitability of any existing monitoring points proposed for inclusion in the **ground water** monitoring well system.

(3) An explanation of how the proposed **ground water** monitoring well system addresses the hydrogeologic conditions identified within the uppermost aquifer system and any significant zones of saturation that exist above the uppermost aquifer system.

(4) A description of how and where ground water monitoring wells will be installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer and any significant zones of saturation that exist above the uppermost aquifer system. Ground water samples must represent both the quality of background ground water quality that has not been affected by the proposed MSWLF unit and ground water quality passing the monitoring boundary of the proposed MSWLF unit.

(5) A description of how **upgradient background ground water monitoring** wells will monitor the same hydrologic units as the downgradient **ground water** monitoring wells.

(6) If a single monitoring well cannot adequately intercept and monitor the vertical extent of a potential pathway of contaminant migration at a sampling location, a description of how a **ground water monitoring** well cluster will be installed.

(7) For the uppermost aquifer system, a description of how ground water monitoring well spacing will not exceed five hundred (500) feet along the monitoring boundary of the proposed MSWLF unit.

In geologically complex environments as determined by the commissioner, closer **monitoring** well spacing may be required. Alternate spacing of ground water monitoring wells must be approved by the commissioner. **Monitoring** well spacing must provide at least two (2) **upgradient background ground water monitoring wells** and four (4) downgradient monitoring wells or well clusters within the uppermost aquifer system and any significant zones of saturation that exist above the uppermost aquifer system. An alternate number of **upgradient background** wells must be approved by the commissioner.

**(8) Alternative ground water monitoring devices or sampling devices may be approved by the commissioner if it is demonstrated that the alternative will provide results that represent ground water quality from beneath the MSWLF in an equivalent manner as provided by ground water monitoring wells. Regardless of location of the alternative monitoring device, the monitoring boundary, for the purposes of 329 IAC 10-21-13, must remain within fifty (50) feet of the solid waste boundary. Any such demonstration must include the following:**

**(A) A complete description of the device and how it complies or differs from 329 IAC 10-21-1 through 13;**

**(B) A scientifically valid justification for any deviations from 329 IAC 10-21;**

**(C) Any references that indicate the proficiency of the device under similar conditions;**

**(D) Provision for the ground water monitoring device or devices construction plan to be approved prior to their construction;**

**(E) A complete description of the proposed location of the device or devices, or the methods of determining the most adequate location, including proof of the facility's control, accessibility, and security of each location.**

(b) The commissioner may consider an individual compliance **ground water** monitoring well system for intrawell statistical comparison methods if the permittee can demonstrate either of the following:

(1) The uppermost aquifer system, and any significant zones of saturation that exist above the uppermost aquifer system are discontinuous.

(2) Significant spatial variability exists within the aquifer.

*(Solid Waste Management Board; 329 IAC 10-15-5; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1823; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2765; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3804)*

SECTION 54. 329 IAC 10-15-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-15-8 Calculations and analyses pertaining to landfill design**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 8. (a) The applicant shall provide calculations and analyses pertaining to the design of the proposed MSWLF unit, if applicable, and if necessary as determined by the commissioner, to indicate that the proposed design complies with the design requirements of 329 IAC 10-17. Any required calculations must be accompanied by a discussion of methods, assumptions, and the references used. Calculations that may be required include the following:

(1) A transmissivity, **in plane hydraulic conductivity**, calculation or an assessment based on the maximum compressive load placed above the geosynthetic, using a minimum safety factor of ten (10),

when a geosynthetic material is used for the drainage layer. In addition, the long term creep impact on the transmissivity of the geosynthetic must be evaluated using a minimum safety factor of five (5).

(2) A permissivity, **cross-plane hydraulic conductivity**, calculation using a minimum factor of safety of fifty (50), when a geosynthetic material is used for the drainage layer.

(3) A filter-retention calculation **or assessment**, when a geosynthetic material is used for the drainage layer.

(4) A tensile stresses calculation to evaluate stresses generated during the construction and operation of the interior of the side slope of the proposed MSWLF unit. A minimum safety factor of five (5) on yield is required.

~~(5) A strain-settlement calculation to evaluate the ability of the geosynthetic layer to resist down-drag forces resulting from the subsidence of the contained waste. A minimum ultimate safety factor of one and one-half (1.5) on ultimate stress is required.~~

(6) (5) A filter-clogging calculation to evaluate the influence of retained soil particles on the permissivity of a geotextile or geonet. Also, a gradient ratio test or a hydraulic conductivity ratio test, as appropriate, must be performed in accordance with test standards specified in 329 IAC 10-17-17.

~~(7) (6) A localized subsidence calculation, if applicable, to evaluate the strains induced in the geomembrane used for the liner system and for final cover.~~

~~(8) (7) A stability of final cover calculation to evaluate the likelihood and extent to which final cover components may slide with respect to each other. A minimum safety factor of one and three-tenths (1.3) as outlined in Table 1 of this section is required.~~

(9) (8) A **geomembrane geosynthetic anchor or pull-out anchorage calculation or assessment** to evaluate the anchoring capacity and stresses in a geomembrane. A minimum safety factor of one and two-tenths (1.2) is required. **An anchor must provide sufficient restraint to hold a geosynthetic liner in place, but should not be so rigid or strong that the geosynthetic liner will tear before the anchor yields.**

~~(10) (9) A settlement potential calculation to estimate the total and differential settlement of the foundation soil due to stresses imposed by the liner system, in-place waste, daily cover, intermediate cover, equipment usage, and final cover.~~

~~(11) (10) A bearing capacity and stability calculation to estimate the load bearing capacity and slope stability of the foundation soil during construction. A minimum safety factor of two (2.0) is required for a static condition.~~

~~(12) A bottom heave and blow-out calculation to estimate the potential for a bottom heave or blow-out due to unequal hydrostatic or gas pressure.~~

**(11) The uplift pressure or hydrostatic pore water pressure must be evaluated based on site-specific conditions.**

~~(13) (12) A waste settlement analysis to assess the potential for the final cover system to stretch due to total and differential settlement of the solid waste. If there is a lack of documented settlement of the solid waste, a value of approximately seven percent (7%) to fifteen percent (15%) of the solid waste height may be used for this calculation.~~

~~(14) (13) A wind uplift force calculation or an assessment to provide an indication that wind uplift will not damage the geomembrane during installation.~~

~~(15) (14) A wheel loading calculation to indicate that the amount of wheel loading of construction equipment will not damage the liner system.~~

~~(16) (15) A puncture of geomembrane calculation to indicate that the amount of down drag force induced by the leachate collection sumps and manhole with vertical standpipe settlement will not cause failure of the underlying liner system. A minimum safety factor of two (2.0) on tensile strength at yield is required.~~

~~(17) (16) An erosion calculation to indicate that the erosion rate will not exceed five (5) tons per acre per year, as is required under 329 IAC 10-22-7(c)(3).~~

~~(18) (17) Pipe calculations to assess the leachate collection piping for deflection, buckling, and crushing.~~

~~(19) (18) If applicable, or if required under 329 IAC 10-16-5(b), an analysis of the effect of seismic activity on the structural components of the landfill.~~

~~(20) (19) A peak flow calculation to identify surface water flow expected from a twenty-five (25) year storm.~~

~~(21) (20) A calculation to identify the total run-off volume expected to result from a twenty-four (24) hour, twenty-five (25) year storm event.~~

~~(22) (21) A chemical resistance evaluation to demonstrate that the leachate collection and removal system components are chemically resistant to the waste and the leachate expected to be generated.~~

~~(23) (22) A clogging evaluation to demonstrate that the system as designed will be resistant to clogging throughout the active life and post-closure period of the MSWLF.~~

~~(24) (23) A slope stability analysis that follows the requirements outlined in Table 1 of this subdivision. Any geosynthetic materials installed on landfill slopes must be designed to withstand the calculated tensile forces acting upon the geosynthetic materials. The design must consider the minimum friction angle of the geosynthetic with regard to any soil-geosynthetic or geosynthetic-geosynthetic interface.~~

TABLE 1  
Minimum Values of Safety Factors for  
Slope Stability Analyses for Liner and Final Cover Systems

Consequences of Slope Failure	Uncertainty of Strength Measurements	
	Small <sup>1</sup>	Large <sup>2</sup>
No imminent danger to human life or major environmental impact if slope fails	1.25 (1.2)*	1.5 (1.3)*
Imminent danger to human life or major environmental impact if slope fails	1.5 (1.3)*	2.0 or greater (1.7 or greater)*

<sup>1</sup>The uncertainty of the strength measurements is smallest when the soil conditions are uniform and high quality strength test data provide a consistent, complete, and logical picture of the strength characteristics.

<sup>2</sup>The uncertainty of the strength measurements is greatest when the soil conditions are complex and when the available strength data do not provide a consistent, complete, and logical picture of strength characteristics.

\*Numbers without parentheses apply for static conditions and those within parentheses apply to seismic conditions.

~~(25) (24) Any additional calculation determined by the commissioner to be necessary to ascertain whether the proposed design complies with the requirements of this article.~~

(b) Test standards for MSWLF liner systems are listed in 329 IAC 10-17-17. (Solid Waste Management Board; 329 IAC 10-15-8; filed

Mar 14, 1996, 5:00 p.m.: 19 IR 1825; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2767; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3806)

SECTION 55. 329 IAC 10-15-12 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-15-12 Storm water pollution prevention plan**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
Affected: IC 13-20; IC 36-9-30

Sec. 12. (a) This section applies to the requirements of implementing a storm water pollution prevention plan at an MSWLF.

(b) The plan must:

- (1) identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the facility;
- (2) describe implementation of practices that will be used to reduce pollutants in storm water discharges to the facility; and
- (3) assure compliance with this article.

(c) The pollution prevention plan must, at a minimum, contain the following information:

- (1) Identification, by title, of staff on the facility's storm water pollution prevention team and their responsibilities.
- (2) A site description and map of the facility describing or showing the following:
  - (A) A description of the planned construction and landfill operational activities.
  - (B) Locations of potential pollutant sources and/or activities that are exposed to precipitation
  - (C) A list of pollutants or pollutant parameters associated with the activities identified in this section.
  - (D) Identification of areas where potential spills and leaks which can contribute pollutants to storm water may occur and their accompanying discharge points.
  - (E) A summary of existing storm water discharge sampling data taken at the facility.

(d) The pollution prevention plan must include a written spill response program to include the following information:

- (1) Location, description, and quantity of all response materials and equipment.
- (2) Response procedures for facility personnel to respond to a release.
- (3) Contact information for reporting spills, both for facility staff and external emergency response entities.
- (4) All corrective actions that will be taken for spills found during inspections, testing, and maintenance, must be documented and included in the SWP3.

(e) A narrative description of potential pollutant source areas, including descriptions for any existing or historical areas, and any other areas thought to be a potential source of storm water exposure to pollutants. The narrative descriptions for each area must include the following:

- (1) Type and typical quantity of materials present in the area.
- (2) Methods of storage, including presence of any secondary containment measures.
- (3) Any remedial actions undertaken in the area, including the following:
  - (A) The date and type of each action, for example, removal of an underground storage tank.

(B) The quantity and type of contaminated materials, such as soils or water, removed or treated.

(C) The results of any analytical sampling data to confirm an adequate removal of contaminated media.

(D) The name and address of any disposal facility utilized.

(4) Any release or spill history dating back a period of three (3) years from the date of the pollution prevention plan, in the area, for materials spilled outside of secondary containment structures in excess of the materials' reportable quantity or twenty-five (25) gallons, whichever is less, including the following:

- (A) The date and type of material released or spilled.
- (B) The estimated volume released or spilled.
- (C) A description of the remedial actions undertaken, including disposal or treatment.
- (D) The results of any analytical sampling data to confirm an adequate removal of contaminated media.

For permit renewals, the history shall date back for a period of five (5) years from the date of the storm water pollution prevention plan.

(5) The descriptions for each area must include a risk identification analysis. The analysis must include the following:

- (A) Toxicity data of chemicals or materials used within the area, referencing appropriate Material Safety Data Sheet information locations.
- (B) The frequency and typical quantity of listed chemicals or materials, to be stored on site.
- (C) Potential ways in which storm water discharges may be exposed to listed chemicals and materials.
- (D) The likelihood of the listed chemicals and materials to come into contact with storm water or facility personnel.

(6) A narrative description of existing and planned management practices and measures to improve the quality of storm water run-off leaving the facility property. Descriptions must be created for existing or historical areas and any other areas thought to be a potential source of storm water exposure to pollutants. The description must include the following:

- (A) Any existing or planned structural and nonstructural control practices and measures.
- (B) Any treatment the storm water receives prior to leaving the facility property.
- (C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.

(7) If parameter reductions are not indicated in the comparative table compiled under subsection (e)(3), the source of the pollutant parameter must be investigated, and either eliminated or reduced via a management practice or measure. A mapped or narrative description of any such management practice or measure must be added to the SWP3.

(f) The facility shall submit with the SWP3 the following:

- (1) The results of monitoring required in 329 IAC 10-20-11(h) of this rule.
- (2) The monitoring data must include:
  - (A) completed field data sheets;
  - (B) chain-of-custody forms; and
  - (C) laboratory results.
- (3) As two (2) or more sample monitoring events are completed, the laboratory results must be placed in a comparative table, so that each sampled parameter can be compared to indicate water quality improvements in the run-off from the facility.

(g) For the entire facility, storm water exposure to pollutants

must be minimized. To ensure this reduction, a written preventative maintenance program must be written and implemented that includes the following:

- (1) Implementation of good housekeeping practices to ensure the facility will be operated in a clean and orderly manner and that pollutants will not have the potential to be exposed to storm water via vehicular tracking or other means.
- (2) Maintenance of storm water management measures, for example, catch basins or the cleaning of oil or water separators. All maintenance must be documented and contained in the SWP3.
- (3) Inspection and testing of facility equipment and systems to ensure appropriate maintenance of such equipment and systems and to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters must be documented and contained in the pollution prevention plan.

(Solid Waste Management Board; 329 IAC 10-15-12)

SECTION 56. 329 IAC 10-16-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-16-8 Karst terrain siting restrictions**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-20; IC 36-9-30

Sec. 8. (a) This section applies to:

- (1) permit applications under this article for new MSWLFs and lateral expansions; or
- (2) MSWLFs permitted under 329 IAC 1.5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996.

(b) Applicants for new MSWLFs and lateral expansions that are applying for a permit under this article, and for new MSWLFs and lateral expansions permitted under 329 IAC 1.5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996, must not locate any MSWLF unit within the new MSWLFs or lateral expansions in or over karst terrains.

(c) MSWLF units permitted and constructed under 329 IAC 1.5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996, must not be located in or over karst terrains without provisions to collect and contain all of the leachate generated by the MSWLF units and without a demonstration that the integrity of the MSWLF units will not be damaged by subsidence.

(d) For all demonstrations, the commissioner may ask for additional information prior to approval or denial of the demonstration. (Solid Waste Management Board; 329 IAC 10-16-8; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1829; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2046; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2772; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3810)

SECTION 57. 329 IAC 10-17-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-17-2 Overview of liner designs and criteria for selection of design**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-20; IC 36-9-30

Sec. 2. (a) The following liner design is required for any section of a new MSWLF unit within an MSWLF or lateral expansion to be permitted under this article that will not be located over an aquifer of significance, as defined under 329 IAC 10-2-13, or will be located over an aquifer of significance, but there is a continuous layer of at least ten (10)

feet of nonaquifer material, as defined under 329 IAC 10-2-120, separating the base of the proposed soil liner and the uppermost portion of the aquifer:

- (1) At the base and side slopes, starting from the subgrade and extending upward, the liner must include the following components:
  - (A) A minimum of three (3) feet of compacted soil, having a hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second or less.
  - (B) A geomembrane.
  - (C) A drainage layer.
  - (D) A protective cover.
- (2) At all sump areas, and, at a minimum, at the liner areas within ~~twenty-five (25) feet lateral to the center of each sump;~~ **must extend ten (10) feet from the outermost edge of the designated sump boundary, on all sides,** starting from the subgrade and extending upward, the liner must include the following components:
  - (A) A minimum of two (2) feet of compacted soil, having a hydraulic conductivity of  $1 \times 10^{-6}$  centimeters per second or less.
  - (B) A leak detection zone. The leak detection zone must meet the applicable requirements in this section and sections 8, 9, and 13 through 16 of this rule for drainage layers.
  - (C) A minimum of three (3) feet of compacted soil having a hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second or less.
  - (D) A geomembrane.
  - (E) A geosynthetic clay liner.
  - (F) A geomembrane.
  - (G) A drainage layer.
  - (H) A protective cover.

(b) The following liner design is required for any section of a new MSWLF unit or lateral expansion within an MSWLF to be permitted under this article that will be located over an aquifer of significance, as defined under 329 IAC 10-2-13, and there is not a continuous layer of at least ten (10) feet of nonaquifer material, as defined under 329 IAC 10-2-120, separating the base of the proposed soil liner and the uppermost portion of the aquifer:

- (1) At the base and side slopes, starting from the subgrade and extending upward, the liner must include the following components:
  - (A) A minimum of two (2) feet of compacted soil, having a hydraulic conductivity of  $1 \times 10^{-6}$  centimeters per second or less. This component must extend up the side slope of the proposed MSWLF unit to a height at least two (2) feet above the highest temporal fluctuation of the ground water table, as determined from the hydrogeologic site investigation required under 329 IAC 10-15-4.
  - (B) A drainage layer. This component must extend up the side slope of the proposed MSWLF unit to a height at least two (2) feet above the highest temporal fluctuation of the ground water table, **but not closer than five (5) feet from the ground surface,** as determined from the hydrogeologic site investigation required under 329 IAC 10-15-4.
  - (C) A minimum of three (3) feet of compacted soil having a hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second or less.
  - (D) A geomembrane.
  - (E) A drainage layer.
  - (F) A protective cover.

(2) At all sump areas, and, at a minimum, at the liner areas within ~~twenty-five (25) feet lateral to the center of each sump;~~ **must extend ten (10) feet from the outermost edge of the designated sump boundary, on all sides,** starting from the subgrade and extending upward, the liner must incorporate the design components described in subsection (a)(2).

(c) For the purposes of this rule, sump areas are considered to be



those areas of the proposed MSWLF unit that are designed to collect and remove leachate where leachate is expected to accumulate to a depth of at least one (1) foot.

(d) The minimum distance for extension of liner design components related to sump areas may be increased at the discretion of the commissioner, depending on site-specific factors, with consideration of the highest temporal fluctuations of the ground water table at the site.

(e) The commissioner may make available to the applicant standardized municipal solid waste landfill designs that are not less stringent than the requirements of this rule. (*Solid Waste Management Board; 329 IAC 10-17-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1831; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2774; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3813*)

SECTION 58. 329 IAC 10-17-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-17-7 Geomembrane component of the liner; construction and quality assurance/quality control requirements**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 7. (a) Before geomembrane field construction, the project engineer shall review documentation of quality control testing as follows:

- (1) In a review of the testing of raw materials used to manufacture the geomembrane, the project engineer shall do the following:
  - (A) Ensure that the quality control testing meets the specifications of the approved construction plan.
  - (B) Review copies of the origin and identification of the raw materials.
  - (C) Review copies of quality control certificates issued by the producers of the raw materials. The certificates must be accompanied by results of the following tests unless a particular test requirement is waived by the commissioner:
    - (i) Density test.
    - (ii) Melt flow index test.
    - (iii) Any other test deemed necessary by the commissioner to verify raw material quality.
- (2) In a review of the testing documentation of the geomembrane rolls that are fabricated into geomembrane, the project engineer shall do the following:
  - (A) Check the manufacturer's certified quality control documentation to verify that the geomembrane was continuously inspected during the manufacturing process for the following:
    - (i) Lack of uniformity.
    - (ii) Damage.
    - (iii) Imperfections.
    - (iv) Holes.
    - (v) Cracks.
    - (vi) Thin spots.
    - (vii) Foreign materials.
  - (B) Ensure that any imperfections discovered during inspection were repaired and then reinspected, either at the manufacturing facility or on-site at the MSWLF.
  - (C) Review the results of **manufacturer's** quality control tests **conducted on the finished product by the geomembrane manufacturer: for conformance with project specifications.** These tests must include, at a minimum, the following:
    - (i) ~~Single point stress rupture test:~~ **Stress crack resistance test.**
    - (ii) Tensile strength test.

- (iii) Tear and puncture resistance test.
  - (iv) ~~Any other test deemed necessary by the commissioner to verify finished product quality:~~ **Oxidative induction time (OIT) at: (AA) standard OIT; or (BB) high pressure OIT.**
  - (v) **Ultraviolet resistance at high pressure OIT.**
  - (vi) ~~Any other test deemed necessary by the commissioner to verify quality.~~
- (3) The project engineer shall ensure that manufacturer quality control testing of the raw materials and of the finished geomembrane product was conducted:
    - (A) as required in the approved construction plans; or
    - (B) as otherwise required by the commissioner.
  - (b) During geomembrane field construction, the project engineer shall ensure the following:
    - (1) The geomembrane is installed on supporting soil that is reasonably free of the following:
      - (A) Stones.
      - (B) Organic material, except that organic material naturally occurring in the soil.
      - (C) Irregularities.
      - (D) Protrusions.
      - (E) Loose soil or soft spots.
      - (F) Standing water.
      - (G) Any abrupt change in grade that could damage the geomembrane.
    - (2) All aspects of geomembrane installation are carried out in accordance with the following:
      - (A) The approved construction plan.
      - (B) The manufacturer's recommendations.
      - (C) The design standards described under section 6 of this rule.
      - (D) Any additional requirements necessary to obtain adequate geomembrane liner construction and installation, as specified in the construction plans or as determined by the commissioner.
    - (3) The anchor trench is excavated to the length and width prescribed in the approved construction plans.
    - (4) Field seaming is conducted as follows:
      - (A) To meet the requirements for design of the geomembrane component of the liner, as described under section 6 of this rule.
      - (B) In a manner that leaves seams free of the following:
        - (i) Dust.
        - (ii) Dirt.
        - (iii) Moisture.
        - (iv) Debris.
        - (v) Foreign material of any kind.
      - (C) Using an appropriate method consistent with:
        - (i) the approved construction plan; or
        - (ii) a method otherwise approved by the commissioner.
      - (D) At a time when the following conditions exist, unless otherwise approved by the commissioner or project engineer, or otherwise recommended by the manufacturer:
        - (i) Air temperature is at least thirty-two (32) degrees Fahrenheit but does not exceed one hundred twenty (120) degrees Fahrenheit.
        - (ii) Sheet temperature is at least thirty-two (32) degrees Fahrenheit but does not exceed one hundred fifty-eight (158) degrees Fahrenheit.
        - (iii) Wind gusts are not in excess of twenty (20) miles per hour.
    - (5) Quality assurance and quality control testing conducted in the field conforms with requirements of the approved construction plan and includes the following:
      - (A) A sample is taken from each lot number of geomembrane

material that arrives on site and is tested in the following manner for the purpose of fingerprinting the material:

- (i) Thickness of the sample must be measured at a rate of five (5) measurements per roll of geomembrane, at locations evenly distributed throughout the roll.
- (ii) The following tests must be conducted at a rate of either once per lot or once per fifty thousand (50,000) square feet of geomembrane:
  - (AA) Tensile characteristics test for strength and elongation at yield and at break.
  - (BB) Carbon black content test.
  - (CC) Carbon black dispersion test, if applicable.
  - (DD) Any additional tests that are necessary as determined by the commissioner.

(B) Visual inspections of the geomembrane material, followed by appropriate repairs and reinspections, are made for:

- (i) lack of uniformity;
- (ii) damage;
- (iii) imperfections;
- (iv) tears;
- (v) punctures;
- (vi) blisters; and
- (vii) excessive folding.

(C) Test seams for shear strength and peel strength are made as follows:

- (i) At the start of each work period for each seaming crew.
- (ii) After every four (4) hours of continuous seaming.
- (iii) Every time seaming equipment is changed.
- (iv) When significant changes in geomembrane temperature, as determined by the project engineer or by manufacturer recommendation, are observed.
- (v) As required in the approved construction plan.
- (vi) As may be required by the commissioner.

(D) Nondestructive seam testing proceeds as follows:

- (i) Testing is performed on all seams over their full length using a test method:
  - (AA) in accordance with the approved construction plans;
  - (BB) in accordance with section 17 of this rule; or
  - (CC) otherwise acceptable to the commissioner.
- (ii) Testing is monitored by the project engineer, and seaming and patching operations are inspected for uniformity and completeness.
- (iii) Results of testing are recorded by the project engineer in records that include the following information:
  - (AA) The location of the seam test.
  - (BB) The test unit number.
  - (CC) The name of the person conducting the test.
  - (DD) The results of all tests.
  - (EE) Any other information that may be necessary to judge the adequacy of the seaming and patching procedures.

(E) Geomembrane seams that cannot be nondestructively tested are overlain with geomembrane material of identical type.

(F) Destructive seam testing is performed at the site, or at an independent laboratory, according to the approved construction plans, and meets the following requirements:

- (i) Testing is performed:
  - (AA) on a minimum of one (1) test per five hundred (500) feet of seam length if the seam is welded with a fusion weld;
  - (BB) on a minimum of one (1) test per four hundred (400) feet of seam length if the seam is welded with an extrusion weld;
  - (CC) on a minimum of one (1) test for each seaming machine; and
  - (DD) as otherwise required by the commissioner.

(ii) Destructive seam testing includes:

- (AA) a shear strength test; and
- (BB) a peel strength test.

(iii) If a seam location fails destructive testing:

- (AA) the seam is reconstructed over a minimum of ten (10) feet in each direction from the site of the failed test;
- (BB) additional samples are taken for testing; and
- (CC) reconstruction and retesting is repeated, as necessary, until at least eighty percent (80%) of the samples at the test location pass the destructive seam test.

*(Solid Waste Management Board; 329 IAC 10-17-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1834; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2776; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3815)*

SECTION 59. 329 IAC 10-17-9 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-17-9 Drainage layer component of the liner; construction and quality assurance/quality control requirements**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-20-2; IC 36-9-30

Sec. 9. (a) If the drainage layer material is to consist of soil or soil like materials, the project engineer shall ensure the following:

- (1) A grain size analysis and hydraulic conductivity test is completed **during the installation** for soil drainage layer materials at frequencies described in Table 1 of this subsection.
- (2) The quality control and quality assurance testing of the soil drainage material meets the requirements of the approved construction plans.
- (3) The soil drainage layer is constructed and graded in accordance with the approved construction plans.
- (4) **Carbonate content testing must be performed prior to and during the installation of a drainage layer, if the drainage material is limestone (CaCO<sub>3</sub>) or dolomite/dolostone (Ca-Mg (CO<sub>3</sub>)<sub>2</sub>) or from a source likely to contain a high percentage of carbonate materials. The test must be performed:**
  - (A) at a pH of less than seven (7); and
  - (B) at every three thousand (3,000) cubic yards, with a carbonate content no greater than fifteen per cent (15%).
  - (C) Higher carbonate content may be allowed in drainage layer materials if a demonstration is submitted showing that the hydraulic conductivity of the drainage layer will not be decreased below the minimum of 10<sup>-1</sup> cm/second because of carbonate mineral precipitation.

TABLE 1

Soil Drainage Layer Materials:  
 Minimum Testing Frequencies

Item Tested	Minimum Frequency
Grain size (to the No. 200 sieve)	1 test per 1,500 cubic yards (2,400 per ton)
Hydraulic conductivity test	1 test per 3,000 cubic yards (4,800 per ton) or minimum of 3 tests

(b) If the drainage layer material is to consist of a geosynthetic material, the project engineer shall ensure the following:

- (1) The geosynthetic drainage layer material is chemically compatible with the waste to be deposited and with the leachate that will be generated.
- (2) Effective liquid removal will be maintained by the drainage layer

throughout the active life, closure and post-closure period of the MSWLF.

(3) The geosynthetic drainage layer is constructed and installed in accordance with the approved construction plans.

(4) The quality control and quality assurance testing of the geosynthetic drainage material meets the requirements of the approved construction plans.

(5) Results of the following tests, or equivalent tests where applicable to a specific product, and the following criteria are adequately addressed:

- (A) If the geosynthetic material is a geotextile:
  - (i) grab elongation test;
  - (ii) grab tensile strength test;
  - (iii) puncture resistance test;
  - (iv) trapezoidal tear test;
  - (v) ultraviolet (five hundred (500) hours) resistance test;
  - (vi) abrasion or tumble test;
  - (vii) permittivity test;
  - (viii) apparent opening size (AOS) test;
  - (ix) long term flow (clogging) test;
  - (x) gradient ratio (clogging) test;
  - (xi) the nature of the fibers (i.e., continuous filament or stable fibers);
  - (xii) the chemical compatibility of the geotextile;
  - (xiii) the polymer composition;
  - (xiv) the structure of the geotextile (i.e., woven or nonwoven);
  - (xv) thermal degradation and oxidation in extreme acidic conditions;
  - (xvi) pH resistance of the geotextile;
  - (xvii) creep;
  - (xviii) resistance to extreme temperature;
  - (xix) resistance to bacteria;
  - (xx) resistance to burial deterioration; and
  - (xxi) other tests or information that may become necessary, as determined by the commissioner.
- (B) If the geosynthetic material is a geonet:
  - (i) tensile strength test;
  - (ii) hydraulic transmissivity test;
  - (iii) specific gravity test;
  - (iv) melt flow index test;
  - (v) carbon black content test;
  - (vi) abrasion or tumble test;
  - (vii) creep;
  - (viii) thickness;
  - (ix) chemical compatibility;
  - (x) resistance to extreme temperature;
  - (xi) resistance to bacteria;
  - (xii) resistance to burial deterioration; and
  - (xiii) other tests or information that may become necessary, as determined by the commissioner.

*(Solid Waste Management Board; 329 IAC 10-17-9; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1837; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3818)*

SECTION 60. 329 IAC 10-17-12 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-17-12 Protective cover component of the liner; construction and quality assurance/quality control requirements**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 12. (a) The protective cover must be installed in a single lift with no compaction. Quality control and quality assurance testing on the protective cover must include the following tests conducted at the indicated frequencies during installation of the protective cover:

(1) Grain size distribution to the number 200 sieve must be performed for every one thousand five hundred (1,500) cubic yards of protective cover placed on the liner system.

~~(2) Carbonate content testing must be performed:~~

~~(A) at a pH of four (4.0); and~~

~~(B) every three thousand (3,000) cubic yards;~~

~~and the carbonate content must be no greater than five percent (5%);~~  
 (2) Any additional tests as specified in the construction plans or as determined by the commissioner.

(b) If the geotextile described in section 11(b) of this rule is used as an alternative to the protective cover, the project engineer shall ensure the following:

(1) Proper quality control and quality assurance testing is performed on the geotextile, and adequate results are obtained for the following tests, where applicable, or equivalent tests, performed in accordance with section 17 of this rule:

- (A) Grab elongation test.
- (B) Grab tensile strength test.
- (C) Puncture resistance test.
- (D) Trapezoidal tear test.
- (E) Ultraviolet (five hundred (500) hours) resistance test.
- (F) Abrasion or tumble test.
- (G) Other tests that may become necessary as determined by the commissioner.

(2) The following criteria are addressed when determining the quality of the geotextile:

- (A) The nature of the fibers (i.e., continuous filament or stable fibers).
- (B) The chemical compatibility of the geotextile.
- (C) The polymer composition.
- (D) The structure of the geotextile (i.e., woven or nonwoven).
- (E) Thermal degradation and oxidation in extreme acidic conditions.
- (F) pH resistance of the geotextile.
- (G) Creep.
- (H) Resistance to extreme temperatures.
- (I) Resistance to bacteria.
- (J) Resistance to burial deterioration.
- (K) Other criteria that may become necessary as determined by the commissioner.

*(Solid Waste Management Board; 329 IAC 10-17-12; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1838; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3819)*

SECTION 61. 329 IAC 10-17-18 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-17-18 CQA/CQC preconstruction meeting**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 18. For the purposes of ensuring coordination of all aspects of CQA/CQC, a preconstruction meeting must be held ~~upon the award of the prior to construction contract~~ **in any area not approved to accept solid waste.** The preconstruction meeting must involve all relevant persons involved with implementing the CQA/CQC plan, such as the MSWLF owner or operator, the design engineer, CQA/CQC personnel,

and the primary construction contractor. The preconstruction meeting may be used to accomplish the following:

- (1) Provide each involved entity with all relevant CQA/CQC documents and supporting information addressing the site-specific CQA/CQC plan and its role relevant to the construction plans.
- (2) Review the responsibilities, authorities, and lines of communication for each of the involved entities.
- (3) Review the established procedures for observation and testing, including sampling strategies identified in the CQA/CQC plan.
- (4) Review the established acceptance and rejection criteria as specified in the CQA/CQC plan.
- (5) Review the approved specifications, with methods and means for decision making and resolution of problems pertaining to data.
- (6) Review methods for documenting and reporting all inspection data.
- (7) Discuss procedures for the storage and protection of MSWLF construction material on-site.
- (8) Organize for relevant persons a site walk-around to review the project site layout, construction material and equipment storage locations.
- (9) Discuss the CQA/CQC plan and other relevant issues and concerns.
- (10) Discuss storm water management practices and sedimentation control appropriate for the construction work or as outlined in the construction specifications and plans.**

*(Solid Waste Management Board; 329 IAC 10-17-18; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1840; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3820)*

SECTION 62. 329 IAC 10-19-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-19-1 Preoperational requirements and operational approval**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 1. (a) A new MSWLF or lateral expansion that is permitted under this article must not accept solid waste before the owner, operator, or permittee submits to the commissioner a certification of completion. The certification of completion is a written statement by the owner, operator, or permittee that certifies the following:

- (1) A construction certification report (CCR) has been prepared by a professional engineer and has been submitted to the commissioner. In the CCR, the professional engineer shall certify that the construction of the liner system components proceeded in accordance with the approved construction plans. The CCR must also include the following items:
  - (A) The following information for all components of the liner system:
    - (i) Documentation provided by the manufacturer that describes quality control and quality assurance tests conducted on raw materials and products used in the construction of the liner system component, including a description of methods for sample selection and the frequency with which tests were conducted.
    - (ii) Certification that the CQA/CQC tests were conducted in accordance with the approved construction plan, or as specified by the commissioner.
    - (iii) A summary of the results of all testing, including documentation of any failed test results.
    - (iv) A description of corrective measures taken in response to failed tests.

- (v) A description of all retesting conducted and the results of those tests.
  - (vi) A description of the previous relevant work experience and qualifications of the field crew foreman in charge of liner installation.
- (B) The following information for the soil component of the liner system:
- (i) All measures taken to prevent or remedy soil liner damage from either desiccation or freezing, both during and after construction.
  - (ii) The results of all testing required in Table 1 and Table 2 of 329 IAC 10-17-5(a), including:
    - (AA) description of steps taken to correct any improperly constructed soil material; and
    - (BB) test frequencies.
  - (iii) Certification that construction quality control testing indicated the soil liner material met the applicable hydraulic conductivity requirements.
- (C) The following information for the geomembrane component of the liner system:
- (i) Certification that the test seams were made:
    - (AA) at the start of work for each seaming crew;
    - (BB) after every four (4) hours of continuous seaming;
    - (CC) every time seam equipment is changed;
    - (DD) when significant changes in geomembrane temperature are observed; and
    - (EE) as additionally required in the approved construction plans.
  - (ii) Certification that field seams were nondestructively tested using a method in accordance with the Geosynthetic Research Institute (GRI); the American Society for Testing and Materials (ASTM); the National Sanitation Foundation (NSF); current industry standards; or with construction plans and specifications.
  - (iii) Certification that all seams that could not be nondestructively tested were overlain with geomembrane material of the same type.
  - (iv) Certification that a professional engineer monitored all nondestructive testing, informed the installer of any required repairs, and inspected the seaming and patching operation for uniformity and completeness.
  - (v) Records of:
    - (AA) the locations where samples were taken;
    - (BB) the name of the person conducting the tests; and
    - (CC) the results of all tests.
- (D) If an optional drainage layer filter is used in the liner system design, an assessment of the geotextile filter that includes the following information:
- (i) Polymer property density.
  - (ii) Polymer type.
  - (iii) Ultraviolet stability.
  - (iv) Mechanical properties.
  - (v) Tensile strength.
  - (vi) Permittivity.
  - (vii) Apparent opening size.
  - (viii) Puncture strength.
- (E) Test results documenting the following:
- (i) The chemical compatibility of the geomembrane and leachate collection pipes with waste and leachate. Relevant compatibility test results may be obtained from the manufacturer. If deemed necessary by the commissioner, additional compatibility testing may be required.

- (ii) Adequate transmissivity upon the maximum compressive load for any geosynthetic material used in a drainage layer.
- (2) Certifications by a professional engineer or a certified professional geologist, whichever is appropriate, have been submitted to the commissioner to certify the following:
  - (A) Initial site development and construction has been completed in accordance with the plot plans specified under 329 IAC 10-15-2 and in accordance with any preoperational conditions imposed as conditions in the facility permit, **including all permanent storm water control measures.**
  - (B) Identifiable boundary markers have been established that delineate the approved facility boundaries and the solid waste boundary.
  - (C) Permanent on-site benchmarks have been established with latitude and longitude and Universal Transverse Mercator coordinates, where available, and with vertical (mean sea level elevation) and horizontal control, such that no portion of the constructed solid waste disposal area is further than one thousand (1,000) feet from a benchmark, unless a greater distance is:
    - (i) necessary to avoid placement of benchmarks on filled areas; and
    - (ii) approved by the commissioner.
  - (D) The installation of all required ground water monitoring wells and piezometers and any required road leading to a **monitoring well** or piezometer has been completed.
- (3) The following items have been submitted to the commissioner:
  - (A) A plot plan indicating location, mean sea level elevations, and identification of all ground water monitoring wells and piezometers.
  - (B) A copy of all ground water monitoring well and piezometer logs, including diagrammatical drilling logs and diagrammatical design and construction logs.
  - (C) From each **ground water monitoring well** in the monitoring system, the results of the first of the four (4) required water level measurements and four (4) independent ground water sampling analyses for the constituents in 329 IAC 10-21-15(a) (Table 1A). **Piezometers must be included to collect static water level measurements if part of the ground water monitoring system.** The remaining water level measurements and sampling analyses must be submitted **along with an initial statistical evaluation of the ground water quality data**, no later than six (6) months after the initial receipt of waste at the MSWLF unit.
  - (D) A ground water potentiometric surface map or a flow map, as described under 329 IAC 10-21-1(p).
  - (E) **All financial responsibility documents have been executed and delivered to the department in the form and amount specified.**
- (4) All applicable post construction care procedures were followed.

(b) Upon satisfying all the requirements of subsection (a), a new MSWLF or lateral expansion permitted under this article may begin accepting waste in accordance with this article and with any additional permit conditions, unless the commissioner denies operational approval within twenty-one (21) days of receipt of the certification of completion. (*Solid Waste Management Board; 329 IAC 10-19-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1843; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2782; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3822*)

SECTION 63. 329 IAC 10-20-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-3 Signs**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 3. (a) For all MSWLFs, a sign of at least sixteen (16) square feet must be erected at each MSWLF entrance. The sign must identify the following:

- (1) The MSWLF's name.
- (2) The operating schedule.
- (3) The type of solid waste land disposal facility.
- (4) The MSWLF permit number.
- (5) The name and phone number of a designated emergency contact person to be contacted in case of an emergency.

(b) For purposes of subsection (a)(5), the designated emergency contact person shall be the following:

- (1) Authorized to respond to a reported emergency or be capable of contacting a person authorized to respond to a reported emergency.
- (2) One (1) of the following:
  - (A) An employee or contractor of the facility operator.
  - (B) An answering service who can contact facility emergency personnel.
  - (C) For a municipally owned facility, a local emergency entity and telephone number may be used.

(c) Traffic signs or other devices, as needed, must be provided to promote an orderly traffic pattern to and from the discharge area.

**(d) The operator shall post a notice near the main entrance of a new MSWLF when construction is occurring. The notice must be maintained in a legible condition and contain the following information:**

- (1) The on-site location of a copy of the completed MSWLF operating permit available for viewing.**
- (2) Name, telephone number, and address of a local designated emergency contact person.**
- (3) Location of the construction plan if the site does not have an on-site location to store the plan.**

(*Solid Waste Management Board; 329 IAC 10-20-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1845; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2784; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3824*)

SECTION 64. 329 IAC 10-20-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-8 Records and reports**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 24-6; IC 36-9-30

Sec. 8. (a) The owner, operator, or permittee of a MSWLF shall record and retain at the MSWLF, in an operating record or in an alternative location approved by the commissioner, all MSWLF records, reports, and plans required by this article, including the following:

- (1) An up-to-date copy of the plans and specifications approved by the commissioner in granting the permit.
- (2) A copy of the current permit approved by the commissioner, including any modifications submitted to the commissioner and the response of the commissioner.
- (3) A plot plan that must be updated quarterly. The owner, operator, or permittee shall maintain a log indicating dates of quarterly updates. The plot plan must describe the following:
  - (A) Areas of excavation.
  - (B) Areas of current filling.
  - (C) Areas under intermediate cover.
  - (D) Filled areas lacking final cover.
  - (E) Finished areas with final cover; contoured and seeded.

- (4) Copies of department operating inspection reports during the preceding twelve (12) months.
- (5) An inspection log as required by section 28(c) of this rule.
- (6) A contour map resulting from the annual survey required under section 24(c) of this rule.
- (7) ~~All special waste disposal notifications, certifications, verification notices, notices of denial, site-specific approvals, documentation of waste determinations, and quarterly reports required under 329 IAC 10-8-1.~~ **Documentation used to determine compliance with section 14.1(b)(1) of this rule.**
- (8) Any location restriction demonstration required under 329 IAC 10-16.
- (9) Inspection records, training procedures, and notification procedures required by section 23 of this rule.
- (10) Gas monitoring results from monitoring and any remediation plans required by section 17 of this rule.
- (11) Any gas condensate testing results and amounts generated recorded on a weekly basis.
- (12) Any leachate testing results and weekly leachate pumping quantities.
- (13) Any MSWLF design documentation for placement of leachate or gas condensate in a MSWLF as required under section 27(a)(2) of this rule.
- (14) Any demonstration, certification, finding, monitoring, testing, or analytical data required by 329 IAC 10-21. The owner, operator, or permittee shall maintain records of all monitoring information and monitoring activities, including the following:
  - (A) The date, exact place, and time of the sampling or measurements.
  - (B) The person or persons who performed the sampling or measurements.
  - (C) The date or dates analyses were performed.
  - (D) The person or persons who performed the analyses.
  - (E) The analytical techniques or methods used.
  - (F) The results of such measurements or analyses.
- (15) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by 329 IAC 10-22 and 329 IAC 10-23.
- (16) Any cost estimates and financial assurance documentation required by 329 IAC 10-39.
- (17) Under 329 IAC 11-15-4(b), the owner, operator, or permittee of the MSWLF to which the municipal waste is transported shall retain each manifest for one (1) year and send one (1) copy of each manifest to the commissioner within three (3) months after receiving the manifest. The manifests must be retained on-site at the MSWLF and must be made available to the commissioner's staff upon request.

**(18) Monitoring records for storm water compliance.**

- (b) All information contained in the operating record and self-inspections must be furnished upon request to any representative of the commissioner.
- (c) All reports submitted to the commissioner must be unbound or bound in a three-hole notebook and preferably copied on both sides of the pages.
- (d) The commissioner may set alternative schedules for record keeping and notification requirements except for 329 IAC 10-16-1(d) and 329 IAC 10-21-13. *(Solid Waste Management Board; 329 IAC 10-20-8; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1846; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1727, eff one hundred eight (180) days after filing with the secretary of state; filed Mar 19, 1998, 11:07 a.m.: 21 IR*

*2785; eff Jul 10, 1998; errata filed Apr 8, 1998, 2:20 p.m.; 21 IR 2990; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3826)*

SECTION 65. 329 IAC 10-20-11 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-11 Diversion of surface water and run-on and run-off control systems**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

Sec. 11. (a) The owner, operator, or permittee of MSWLFs shall design, construct, and maintain the following:

- (1) A run-on control system to prevent flow onto the active portion of the MSWLF during the peak discharge from a twenty-five (25) year storm.
- (2) A run-off control system from the active portion of the MSWLF to collect and control at least the water volume resulting from a twenty-four (24) hour, twenty-five (25) year storm.

(b) The owner, operator, or permittee of MSWLFs shall not deposit solid waste in standing or ponded water.

(c) ~~Run-off from the active portion of the MSWLF must be handled in accordance with 327 IAC 15-5, 327 IAC 15-6, and the discharge must meet the effluent limitations of the National Pollutant Discharge Elimination System under 327 IAC 5. Storm water run-off leaving a facility must be discharged in a manner that does not cause or contribute to erosion or sedimentation or a violation of rules of the water pollution control board at 327 IAC 2-1-6(a).~~

(d) **Appropriate measures shall be planned and installed as part of an erosion and sediment control system.**

(e) **All storm water quality measures must be designed and installed under the guidance of a qualified professional.**

(f) **All storm water quality measures and erosion and sediment controls necessary to comply with this rule must be implemented in accordance with the approved storm water pollution prevention plan.**

(g) **Monitoring requirements shall be as follows:**

(1) **Each discharge outfall, or representative discharge outfall, composed entirely of storm water run-off, shall be monitored as follows:**

Parameter	Units	Sample Type	Frequency
Oil and grease	mg/l	grab	Annual
CBOD <sub>5</sub> (Carbonaceous biochemical oxygen demand)	mg/l	grab	Annual
COD (Chemical oxygen demand)	mg/l	grab	Annual
TSS (Total suspended solids)	mg/l	grab	Annual
TKN (Total Kjeldahl nitrogen)	mg/l	grab	Annual
Total phosphorous	mg/l	grab	Annual
pH	s.u.	grab	Annual
Nitrate plus nitrite nitrogen	mg/l	grab	Annual

E. coli bacteria	counts/ 100ml	grab	See subdivision (4)
Total copper	mg/l	grab	See subdivision (5)
Total zinc	mg/l	grab	See subdivision (5)
Total lead	mg/l	grab	See subdivision (5)

(2) Each discharge outfall subject to subdivision (1) shall be monitored for any other pollutant which is reasonably expected to be present in the discharge, as well as for any other pollutant as requested by the commissioner.

(3) Facilities that have other pollutants limited by or required to be monitored under a NPDES discharge permit issued by the commissioner for any discharge shall also monitor the storm water grab sample for any additional parameters listed in that permit.

(4) Within the first year after the latest effective date of this section, a permittee shall sample and analyze the discharge from the outfall identified in the approved pollution prevention plan for E. coli bacteria. The analytical result will be used to aid in the confirmation of the nonstorm water assessment. If bacteria counts are determined to be above two-hundred thirty-five (235) counts per one-hundred (100) milliliters in the facility discharge and the source is attributable to the facility, sampling for this parameter will continue on an annual basis, until the bacteria count is below laboratory detection limitations. If bacteria counts are below laboratory detection limitations, E. coli bacteria needs to be monitored once in the five (5) year permit cycle.

(5) Within the first year after the latest effective date of this section, a permittee shall sample and analyze the discharge from the outfall identified in the approved pollution prevention plan for total copper, zinc, and lead. If concentrations of these metals are determined to be above three-hundredths (0.03) milligrams per liter for copper, one-tenths (0.10) milligrams per liter for lead, and two-tenths (0.20) milligrams per liter for zinc and the source is attributable for the facility, sampling of these three (3) parameters will continue on an annual basis, until the concentrations are below the above-stated limitations. If concentrations of any of these metals are below the above-stated concentrations limitations, the metal only needs to be monitored once in the five (5) year permit cycle, or, as analysis requires, annually when facility processes change which cause any of these metals to potentially be exposed to storm water run-off and an annual sampling and analysis protocol would be followed.

(6) During the first year after the latest effective date of this section and prior to implementation of the SWP3, an owner, operator or permittee shall sample and analyze the discharge from the outfall identified in the approved pollution prevention plan. The monitoring data taken from this first year event shall be used by the facility as an aid in developing and implementing the SWP3. Subsequent annual sampling data shall be used to verify the effectiveness of the SWP3 and will aid the facility with revising the SWP3 and with the implementation of additional best management practices, as necessary.

(7) The commissioner may require a facility to sample additional storm events beyond the required five (5) annual events upon finding reasonable cause. The commissioner shall notify the facility in writing that additional sampling is required.

(8) A grab sample must consist of at least one hundred (100) milliliters of the discharge collected during the first thirty (30) minutes, or as soon thereafter as practicable.

(9) The pH measurement must be taken immediately after the grab sample is collected and by using a portable pH meter that

provides results displayed in numeric units. A color comparison analysis for pH is not acceptable.

(10) There shall be a minimum of three (3) months between reported sampling events.

(11) Samples must be taken at a point representative of the discharge but prior to entry into surface waters of the state or a municipal separate storm sewer.

(12) All samples must be collected from a discharge resulting from a measurable storm event at least seventy-two (72) hours from the previous measurable storm event and, where feasible, where the duration and total precipitation does not exceed fifty percent (50%) from the average or median precipitation event in the area, as determined by the nearest United States National Weather Service Information Center. Documentation of weather conditions that prevent sampling as described in this subsection must be provided to the commissioner.

(13) The analytical and sampling methods used must meet quality assurance and quality control requirements.

(14) Run-off events resulting from snow or ice melt should not be sampled and may not be used to meet the minimum annual monitoring requirements.

(h) Reporting requirements shall be as follows:

(1) All samples must be reported as a value of concentration.

(2) For each measurement or sample taken under this rule, the owner, operator or permittee of the facility shall record and submit the following information to the commissioner:

(A) The exact place, date, and time of the start of the discharge, the magnitude of the storm event sampled in inches, and time of sampling.

(B) The duration between the storm event sampled and the end of the previous measurable storm event.

(C) The individual who performed the sampling or measurements.

(D) The dates the analyses were performed.

(E) The individual who performed the analyses.

(F) The analytical techniques or methods used.

(G) The results of all required analyses and measurements.

(H) A complete copy of the laboratory report, including chain-of-custody.

(3) All records and information resulting from the monitoring activities, including all records of analyses performed and calibration and maintenance of instrumentation, must be retained for a minimum of five (5) years following the expiration of the facility's permit, or longer if requested by the commissioner.

(4) An owner, operator or permittee shall submit sampling data results to the commissioner within thirty (30) days after laboratory analyses have been completed.

(5) An owner, operator or permittee of a facility that has a discharge which enters a municipal separate storm sewer shall also submit a copy of the sampling data results to the operator of the municipal system upon request.

(6) If an owner, operator or permittee monitors a pollutant more frequently than required, using analytical methods specified in this subsection, the results of such monitoring must be reported as additional information. Such increased frequency must also be indicated.

*(Solid Waste Management Board; 329 IAC 10-20-11; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1848; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3827)*

SECTION 66. 329 IAC 10-20-12 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-12 Erosion and sedimentation control measures; general requirements**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 12. (a) Erosion and sedimentation control measures must be instituted to minimize the off site migration of any sediment. All run-off from disturbed acreage must pass through a sedimentation basin or an approved alternative sediment control practice. The commissioner may require additional erosion and sediment control measures.

(b) A storm water or sedimentation basin or series of basins permitted and constructed under this article must be constructed in accordance with the following:

- (1) Be designed to handle, simultaneously, the run-off resulting from the ten (10) year, twenty-four (24) hour precipitation event and the sediment storage volume required by subdivision (3).
- (2) An appropriate combination of principal and emergency spillway shall be provided to discharge safely the run-off from a twenty-five (25) year, twenty-four (24) hour precipitation event with a minimum of two (2) feet of freeboard.
- (3) Provide a minimum of three (3) years of sediment storage volume. The following requirements apply:
  - (A) Sediment must be removed from sedimentation basins when the volume of sediment accumulates to fifty percent (50%) or more of the designed sediment storage volume.
  - (B) A sediment storage volume of less than three (3) years may be approved by the commissioner if an annual approved maintenance program will be performed.
- (4) Provide a detention time of at least twenty-four (24) hours for the ten (10) year, twenty-four (24) hour precipitation event. A detention time of less than twenty-four (24) hours may be approved by the commissioner if the following is demonstrated by the owner, operator, or permittee:
  - (A) The discharge will not result in the release of a significant quantity of sediment from the MSWLF.
  - (B) Will not violate any local, state, or federal laws pertaining to discharges.
- (5) The principal spillway must be located at a height above the maximum elevation of the designed sediment storage volume required by subdivision (3).
- (6) Discharge in compliance with all applicable state and federal laws.
- (7) The length-to-width ratio of the flow path shall be 2:1 or greater from the inflow to the outflow. Baffles may be used within the basin to achieve this ratio.

(c) If deemed necessary by the commissioner, additional erosion and sediment control practices may be required in the drainage areas of permanent basins for the purposes of increasing the life of the basin and increasing the overall efficiency of removing sediment from run-off.

(d) Alternatives to the requirements in subsections (b) through (c) may be approved by the commissioner. Factors that will be considered include the following:

- (1) The amount of water collected from disturbed areas and undisturbed areas.
- (2) Use of erosion control measures on disturbed areas.
- (3) Sedimentation control measures utilized in the drainageways.

(e) The commissioner may require the submittal of the following information for any storm water/sedimentation pond or basin to verify it is designed and constructed properly:

- (1) Basin plan view.
- (2) Typical cross section.
- (3) All the inlet and outlet elevations.
- (4) Assumptions used to size the basin.
- (5) Calculations used.
- (6) Justifications.

**(f) A storm water pollution prevention plan must be prepared in accordance with 329 IAC 10-15-12. The plan must be updated whenever there is a change at the facility that would significantly affect the storm water discharges authorized under the facility permit. The plan must be kept on-site and must be available to the commissioner at the time of an on-site inspection.** (*Solid Waste Management Board; 329 IAC 10-20-12; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1848; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2786; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3827*)

SECTION 67. 329 IAC 10-20-13 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-13 Cover; general provisions**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 13. (a) Except as provided in subsection (c), daily cover for MSWLFs must be earthen material or an alternative daily cover as allowed under section 14.1 of this rule. Intermediate cover for MSWLFs must be ~~Classification ML~~; earthen material or other suitable material approved by the commissioner to provide an adequate level of environmental protection. Final cover must be as specified in 329 IAC 10-22-6 or 329 IAC 10-22-7, whichever is applicable.

(b) Cover must be applied and maintained at MSWLFs in accordance with the applicable requirements of this rule and 329 IAC 10-22. Other provisions for cover may be approved by the commissioner if it can be demonstrated that an alternate cover or site design will provide an adequate level of environmental protection.

- (c) Daily and intermediate cover for MSWLFs without a:
- (1) leachate collection system; and
  - (2) composite liner;

must be soil of Unified Soil Classification ML, CL, MH, CH, or OH, or other suitable material approved by the commissioner to provide an adequate level of environmental protection. Final cover must be as specified in 329 IAC 10-22-6 or 329 IAC 10-22-7, whichever is applicable. (*Solid Waste Management Board; 329 IAC 10-20-13; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1849; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3828*)

SECTION 68. 329 IAC 10-20-20 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-20 Leachate collection, leachate removal, and leachate disposal**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 20. (a) The owner, operator, or permittee of an MSWLF ~~that has a previously existing leachate collection or leachate removal system shall develop~~ have a leachate contingency plan. ~~within six (6) months of the effective date of this rule.~~ At a minimum, the plan must address all the requirements listed in 329 IAC 10-15-11(a).

- (b) The owner, operator, or permittee shall:
- (1) operate the leachate collection or leachate removal system in



compliance with the design standards and plans specified in 329 IAC 10-15 and 329 IAC 10-17-8 through 329 IAC 10-17-9;

(2) monitor and maintain the leachate collection or leachate removal system as required in the leachate contingency plan under 329 IAC 10-15-11(a)(1) through 329 IAC 10-15-11(a)(2) or subsection (a); and  
(3) implement the leachate contingency plan required under 329 IAC 10-15-11(a)(4) or subsection (a), if the leachate collection or leachate removal system is not operation or leachate levels are exceeded.

(c) Any discharge or disposal of collected leachate must be accomplished in accordance with all applicable local, state, and federal laws.

(d) The leachate contingency plans required by 329 IAC 10-15-11 and subsection (a) must be retained in the operating record on-site at the MSWLF as required by section 8(a) of this rule and be made available to representatives of the department upon request. (*Solid Waste Management Board; 329 IAC 10-20-20; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1852; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3832*)

SECTION 69. 329 IAC 10-20-24 IS AMENDED TO READ AS FOLLOWS:

### **329 IAC 10-20-24 Survey requirements**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 24. (a) The owner, operator, or permittee of an MSWLF shall maintain the series of identifiable boundary markers required under 329 IAC 10-19-1(a)(2)(B) to delineate the approved solid waste land disposal facility ~~boundaries~~ **boundary** and approved solid waste boundaries for the life of the MSWLF.

(b) The owner, operator, or permittee shall maintain the on-site benchmarks required under 329 IAC 10-19-1(a)(2)(C) so that no portion of the proposed solid waste disposal area is further than one thousand (1,000) feet from a benchmark unless a greater distance is necessary to avoid the placement of benchmarks on filled areas and is approved by the commissioner.

(c) The owner, operator, or permittee shall conduct an annual survey between October 1 and December 31 of each year for the purpose of establishing a contour map that indicates existing contours of the MSWLF and the existing limits of solid waste disposed at the MSWLF. The contour map must be done at the same scale as the final contour map required under 329 IAC 10-15-2. The contour map must indicate the day the survey was conducted and must be submitted to the department by February 15 of the year following the survey in a paper copy form as required by ~~329 IAC 10-15-2(b)~~. **In addition to the paper copy, a copy may also be submitted electronically. section 8 of this rule.**

(d) The owner, operator, or permittee of a currently permitted MSWLF shall submit a present contour map and a proposed final contour map on paper copy form as required by 329 IAC 10-15-2(b). In addition to the paper copy forms, a copy may also be submitted electronically. No subsequent annual submissions of the final contour map will be necessary unless there is a change to the approved final contours. (*Solid Waste Management Board; 329 IAC 10-20-24; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1853; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2789; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3834*)

SECTION 70. 329 IAC 10-20-26 IS AMENDED TO READ AS FOLLOWS:

### **329 IAC 10-20-26 Surface water requirements**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

**Affected:** IC 13-30-2; IC 36-9-30

Sec. 26. (a) The owner, operator, or permittee of an MSWLF shall not cause a discharge of pollutants into waters of the state, including wetlands, that violates any requirements of 327 IAC and the Clean Water Act, including the National Pollutant Discharge Elimination System requirements, under Section 402 of the Clean Water Act, 33 U.S.C. 1342, as amended October 31, 1992.

(b) The owner, operator, or permittee of an MSWLF shall not cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area wide or statewide water quality management plan that has been approved under Section 208, 33 U.S.C. 1288, as amended February 4, 1987, or Section 319, 33 U.S.C. 1329, as added February 4, 1987, of the Clean Water Act.

**(c) Proper storage and handling of materials such as fuels or hazardous wastes, and spill prevention and cleanup measures shall be implemented to minimize the potential for pollutants to contaminate surface or ground water or degrade soil quality.** (*Solid Waste Management Board; 329 IAC 10-20-26; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1853; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3835*)

SECTION 71. 329 IAC 10-20-28 IS AMENDED TO READ AS FOLLOWS:

### **329 IAC 10-20-28 Self-inspections**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

**Affected:** IC 13-30-2; IC 36-9-30

Sec. 28. (a) The owner, operator, or permittee of an MSWLF shall monitor and inspect the MSWLF a minimum of at least twice each month for malfunctions, deteriorations, operator errors, discharges, and leachate outcroppings that may cause a release to the environment or a threat to human health. **Inspections shall include monitoring erosion and sedimentation control measures. These inspections must be documented and maintained on-site.**

(b) The owner, operator, or permittee shall promptly correct any deterioration or malfunction of equipment or structures or any other problems revealed by the inspections to comply with the MSWLF's permit and this article and to ensure that no environmental or human health hazard develops. Where a hazard is imminent or has already occurred, remedial action must be taken immediately to correct or repair the hazard.

(c) The owner, operator, or permittee shall record inspections on an inspection form provided by the department or at a minimum, on a form that includes the following:

- (1) The date and time of the inspection.
- (2) The name of the inspector.
- (3) A description of the inspection, including an identification of the specific equipment and structures inspected.
- (4) The observations recorded.
- (5) The date and nature of any remedial actions implemented or repairs made as a result of the inspection.

These records must be retained at the MSWLF for at least three (3) years from the date of inspection. (*Solid Waste Management Board; 329 IAC 10-20-28; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1854; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3835; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 72. 329 IAC 10-21-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-1 General ground water monitoring requirements**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3

Affected: IC 13-20; IC 36-9-30

Sec. 1. (a) The owner, operator, or permittee of MSWLFs shall comply with the ground water monitoring requirements of this rule according to the following schedule:

(1) Existing MSWLF units and lateral expansions less than or equal to two (2) miles from a drinking water surface or subsurface intake must be in compliance with the applicable ground water monitoring requirements specified in this rule by the effective date of this rule.

(2) Existing MSWLF units and lateral expansions greater than two (2) miles from a drinking water surface or subsurface intake must be in compliance with the applicable ground water monitoring requirements specified in this rule by October 9, 1996.

(3) New MSWLF units must be in compliance with the applicable ground water monitoring requirements specified in this rule before waste can be placed in the unit.

(b) Alternative methods, procedures, or equipment to those prescribed in this rule may be used provided the selected alternative yields results or measurements that are equivalent in accuracy and reliability and the use of the alternative is approved by the commissioner. **Alternative ground water monitoring devices or sampling devices may be approved by the commissioner if it is demonstrated that the alternative will provide results that represent ground water quality from beneath the MSWLF in an equivalent manner than could be provided by ground water monitoring wells. Regardless of location of the alternative monitoring device, the monitoring boundary, for the purposes of 329 IAC 10-21-13, must remain within fifty (50) feet of the solid waste boundary. Any such demonstration must include the following:**

(1) **A complete description of the device and how it complies or differs from 329 IAC 10-21-1 through 13.**

(2) **A scientifically valid justification for any deviations from 329 IAC 10-21.**

(3) **Any references that indicate the proficiency of the device under similar conditions.**

(4) **Provision for the construction plan for the device(s) to be approved prior to the actual construction.**

(5) **A complete description of the proposed location of the device(s), or the methods of determining the most adequate location, including proof of the facility's control, accessibility for operations and inspections, and security of each location.**

(c) The number, spacing, and location of ground water monitoring wells **and piezometers** for an existing MSWLF must comply with the MSWLF's permit. The number, spacing, and location of ground water monitoring wells **and piezometers** for new MSWLFs must meet the requirements of 329 IAC 10-15-5.

(d) All ground water monitoring wells **and piezometers** must be affixed with permanent identification that uniquely identifies each **monitoring** well at the MSWLF. The owner, operator, or permittee shall:

- (1) number;
- (2) label; and
- (3) maintain labels;

on all **ground water** monitoring wells **and piezometers**.

(e) Ground water monitoring wells **and piezometers** must be accessible and visible at all times. Access to **ground water monitoring** wells through on-site roads must be available, regardless of weather conditions. Access to monitoring wells for four (4) wheel drive vehicles must be provided to ensure vehicle access throughout any season of the year. Vegetation must be controlled on the on-site roads and around **the monitoring wells and piezometers**. Access to all **ground water** monitoring wells **and piezometers** approved by the commissioner must be restricted to operating personnel, department personnel, and persons contracted by the owner, operator, or permittee to collect samples.

(f) Ground water monitoring wells, **piezometers**, and equipment must be properly maintained to ensure representative ground water samples. The owner, operator, or permittee must practice proper maintenance procedures, including the following:

(1) **Keep all the ground water monitoring** wells securely capped and locked when not in use. The owner, operator, or permittee shall maintain all the caps and locks.

(2) Make repairs as necessary to correct any wear, decay, severe corrosion, or physical damages that are observed on or in the **ground water monitoring** well, **piezometer**, or dedicated equipment and submit to the commissioner documentation that the necessary repairs have been made to maintain the integrity of the **monitoring** well.

(3) Maintain proper drainage around each **ground water monitoring** well head **and piezometer** by the use of a concrete pad around the protective casing of each **monitoring** well.

~~(4) Control vegetation height around each of the wells as required in 329 IAC 10-20-2(d).~~

~~(5)~~ (4) Redevelop a **ground water monitoring** well that has accumulated a silt volume of more than twenty percent (20%) of the screen length. The **monitoring** well must be redeveloped prior to the next sampling event.

(g) If a ground water monitoring well **or a piezometer** is destroyed or otherwise fails to properly function, the owner, operator, or permittee must comply with the following requirements:

(1) The owner, operator, or permittee shall provide the commissioner with a written report within ten (10) days of discovering that the **ground water monitoring** well **or piezometer** is destroyed or not properly functioning. The report must include the following information:

(A) The date of discovery that a **ground water monitoring** well **or piezometer** is destroyed or is not properly functioning.

(B) The probable cause of **ground water monitoring** well **or piezometer** destruction, damage, or malfunction.

(C) A proposed repair or replacement plan, in accordance with subdivision (2) and with section 4 of this rule, that is subject to the commissioner's approval.

(2) Within thirty (30) days after receiving the commissioner's approval of the plan submitted under subdivision (1)(C), the **ground water** monitoring well **or piezometer** must be repaired or replaced in accordance with the following:

(A) If the **ground water monitoring** well **or piezometer** is repaired, the following requirements must be fulfilled:

(i) The owner, operator, or permittee shall submit to the commissioner a description of the repair methods.

(ii) The owner, operator, or permittee shall submit to the commissioner the revised design and construction diagram.

(B) If the ground water monitoring well **or piezometer** is replaced, the following requirements must be fulfilled:

- (i) The original ground water monitoring well **or piezometer** must be properly abandoned in accordance with subsection (i).
- (ii) A description of installation methods for the replacement of all pertinent ground water monitoring wells **or piezometers**, a **monitoring well and piezometer** design and construction diagram, and the borehole drilling log must be submitted to the commissioner.
- (iii) **Replacement ground water monitoring wells or piezometers must meet the design requirements of 329 IAC 10-21-4.**
- (iv) **Replacement ground water monitoring wells or piezometers constructed within fifteen (15) feet of the original monitoring well or piezometers may have earthen material sampling and earthen material sample testing requirements waived if:**
  - (AA) **the original ground water monitoring well or piezometer earthen material sampling and earthen material sample testing complies with 329 IAC 10-21-4; and**
  - (BB) **the waiver is approved by the commissioner.**
- (3) If discovery of a **ground water monitoring well or piezometer** failure coincides with the time of a scheduled sampling event, the failed monitoring well **or piezometer** must be sampled immediately after it has been repaired or replaced.
- (h) The owner, operator, or permittee shall abandon and replace a ground water monitoring well if:
  - (1) the ground water monitoring well has a permeable or semipermeable annular sealant; or
  - (2) any of the following details of the ground water **monitoring** well construction are not available:
    - (A) Screened interval.
    - (B) Annular sealant material.
    - (C) Borehole and casing diameters.
    - (D) Casing and screen material.
    - (E) Ground elevation and the reference mark elevation.
    - (F) Outside casing diameter and depth.
    - (G) Filter pack material.
- (i) The owner, operator, or permittee shall notify the commissioner in writing and obtain written approval to decommission or abandon any ground water monitoring well **and piezometer**. Abandonment procedures must comply with the following:
  - (1) Abandonment procedures must be:
    - (A) in compliance with ~~310 IAC 16-10-2~~ **312 IAC 13-10-2** of the department of natural resources; or
    - (B) an alternative procedure approved by the commissioner.
  - (2) Methods of abandonment must ensure that slurry does not bridge or become obstructed and that the borehole is completely sealed.
  - (3) Attempts must be made to remove the entire casing from the **ground water monitoring well or piezometer** to be abandoned, if there is evidence that the integrity of the annulus between the borehole and **monitoring well or piezometer** casing has been compromised.
  - (4) Accurate records of the location and abandonment procedures must be maintained in the operating records.
- (j) All ground water monitoring wells that have been approved by the commissioner must be used to obtain ground water to be analyzed for the purpose of this rule.
- (k) The commissioner may require additional ground water monitoring wells **and piezometers** during the active life, closure, or post-closure care period of the MSWLF if:

- (1) ground water flow data indicate that ground water flow directions are other than anticipated in the ground water monitoring system design;
- (2) further evaluation of the hydrogeology of the MSWLF determines that additional **ground water monitoring wells or piezometers** are needed; or
- (3) additional **ground water monitoring wells and piezometers** are necessary to achieve compliance with ground water monitoring standards under 329 IAC 10-15-5.

- (l) The ground water monitoring boundary must be located:
  - (1) within the property line; and
  - (2) within fifty (50) feet of the solid waste boundary that has been approved by the commissioner for final closure, except where fifty (50) feet is not possible because of physical obstacles or geology. If the owner, operator, or permittee chooses to use intrawell comparison procedures to evaluate the ground water data, the monitoring boundary shall be considered to be at the location of each ground water monitoring well designated for the detection monitoring program.

(m) The number of independent ground water samples collected to establish background ground water quality data must be consistent with the appropriate statistical procedures in accordance with section 6 of this rule.

(n) Background ground water quality may be established at ground water monitoring wells that are not located hydraulically upgradient from the MSWLF solid waste boundary if, as determined by the commissioner:

- (1) hydrogeologic conditions do not allow the owner, operator, or permittee to determine which **ground water monitoring** wells are hydraulically upgradient; or
- (2) sampling at other **ground water monitoring** wells will provide an indication of background water quality that is as representative or more representative than that provided by the upgradient **monitoring** wells.

(o) If contamination is detected in any ground water monitoring well used to establish background ground water quality, the contamination must be investigated, within the MSWLF's facility boundary, to the extent necessary to determine that the MSWLF is not the cause of contamination. If an investigation reveals that the contamination is caused by one (1) or more MSWLF units within the MSWLF, the owner, operator, or permittee must:

- (1) further assess and investigate the contamination, as specified under section 10 of this rule; and
- (2) use any **ground water monitoring** well in which the contamination is detected as a downgradient **monitoring** well in all ground water monitoring programs.

(p) Each time ground water samples are collected from ground water monitoring wells at the monitoring boundary, the owner, operator, or permittee shall prepare and submit to the commissioner ground water potentiometric - surface maps, or flow maps, of the aquifer being monitored at the site. Except for subdivisions (5), (11), and ~~(13)~~ (12), which may be presented in tabular form accompanying the maps, each map must indicate the following:

- (1) A clear identification of the contour interval for the potentiometric-surface or water table surface of each aquifer being monitored at the MSWLF.
- (2) The ground water monitoring wells **and piezometers**:

- (A) considered to be upgradient **and background**;
- (B) considered to be downgradient; and
- (C) for which there has been no determination due to the hydrogeologic complexities.
- (3) Each ground water monitoring well's identification and location.
- (4) Each piezometer's identification and location.
- (5) The static water elevations at each ground water monitoring well, referenced to mean sea level and measured to the nearest one-hundredth (0.01) foot.
- (6) Real property boundaries, facility boundaries, and the solid waste boundaries.
- (7) The identification of each aquifer through either its title or its elevation.
- (8) The MSWLF's name and county.
- (9) The map scale and a north arrow.
- (10) Ground water flow arrows.
- (11) The date and time of the measurements for each of the **ground water monitoring wells and piezometers**.
- (12) The elevation of the ground surface and the top of the casing at each **ground water monitoring** well and piezometer. The elevation of the referenced mark located on top of the casing of each ground water monitoring well and piezometer must be surveyed to the nearest plus or minus one-hundredth ( $\pm 0.01$ ) foot. The referenced mark must be used to measure static water levels.
- (13) The following information, upon request by the commissioner:
  - (A) An updated site surface topography and surface water drainage patterns as described under 329 IAC 10-15-4(b)(12) if the potentiometric surface being evaluated is influenced by surface topography.
  - (B) All water wells and surface water bodies used as a drinking water source within one-fourth ( $\frac{1}{4}$ ) mile of the solid waste boundary.
  - (C) Any other information the commissioner determines to be necessary, **including ground water flow gradient and velocity**, to evaluate the map information.
- (14) **Unless the commissioner deems necessary, potentiometric surface maps are not required to be submitted for the following reasons:**
  - (A) **When very few ground water monitoring wells are required to be sampled to establish background for the constituents listed in Table 1A under 329 IAC 10-21-15(a).**
  - (B) **When very few ground water monitoring wells need to be sampled to verify a preliminary exceedance.**
  - (C) **When very few ground water monitoring wells are required to be sampled under 329 IAC 10-21-10(b)(1) or 329 IAC 10-21-10(e).**
  - (D) **When very few ground water monitoring wells need to be sampled to establish background under 329 IAC 10-21-10(b)(4).**
- (q) Ground water must be monitored as required in sections 7, 10, and 13 of this rule. The sampling frequency must be as specified under:
  - (1) section 7 of this rule for detection monitoring;
  - (2) section 10 of this rule for assessment monitoring; and
  - (3) section 13 of this rule for corrective action.

(r) ~~All ground water monitoring wells that are so specified by the commissioner must have ground water samples collected and analyzed for the constituents identified in Table 1A, Table 1B, or Table 2, whichever is applicable. Ground water sampling must be done semiannually or at another frequency specified by the commissioner.~~

(s) ~~(r)~~ Each time ground water samples are collected from ground water monitoring wells at the monitoring boundary, the following requirements for static water elevations must be:

- (1) Obtained from each ground water monitoring well and each piezometer **required to be sampled for the applicable ground water monitoring program**.
- (2) Measured to the nearest one-hundredth (0.01) foot, and referenced to mean sea level.
- (3) Obtained as close in time as practical from each **ground water monitoring** well or piezometer prior to purging and sampling each **ground water monitoring** well. If such a purging and collection sequence is expected to affect the accuracy of the static water elevation measurements in any **ground water monitoring** well or piezometer in the ground water monitoring system, then water elevation measurements must be obtained prior to purging and sampling any **ground water monitoring** well.

(t) ~~(s)~~ The owner, operator, or permittee shall submit the following information to the commissioner within sixty (60) days of obtaining the ground water samples in a sampling event unless a verification sampling program, as described in section 8 of this rule, is implemented:

- (1) All static water elevations measured to the nearest one-hundredth (0.01) foot.
- (2) Ground water potentiometric-surface maps, or flow maps, as specified in subsection (p).
- (3) Two (2) unbound laboratory certified reports, including one (1) original copy, that include the following information, **unless otherwise specified by the commissioner**:
  - (A) The detection limit for each chemical constituent.
  - (B) The date samples were collected.
  - (C) The date samples were received by the laboratory.
  - (D) The date samples were analyzed by the laboratory.
  - (E) The date the laboratory report was prepared.
  - (F) The method of analysis used for each constituent.
  - (G) The sample identification number for each sample.
  - (H) The results of all sample analyses.
- (4) Field report sheets as described under section 2(b)(12) of this rule for each ground water monitoring well sampled and the field chain of custody form for each sample as described under section 2(b)(14) of this rule.
- (5) A report correlating sample identification numbers with the corresponding **ground water monitoring** well identification number and blank identification numbers.
- (6) An explanation of how the **ground water monitoring** well sampling sequence as described under section 2(a)(6) of this rule was established for the sampling event.
- (7) **Two (2) copies** of the statistical evaluation reports as described under section 6(e) of this rule.
- (8) ~~When requested by the commissioner, one (1) copy of the results of the laboratory analyses on computer diskette or by other electronic means must be submitted to the commissioner. The electronic format of the submission will be established by the commissioner.~~

(u) ~~(8)~~ When requested by the commissioner, the following information:

- (A) The results of all laboratory quality control sample analyses, including:
  - (i) blanks;
  - (ii) spikes;
  - (iii) duplicates; and
  - (iv) standards.
- (B) Raw data.

- (C) Laboratory bench sheets.
- (D) Laboratory work sheets.
- (E) Chromatograms.
- (F) Instrument printouts.
- (G) Instrument calibration records.

(†) (t) Detection monitoring must be conducted throughout the active life, closure, and post closure periods of the MSWLF. (*Solid Waste Management Board; 329 IAC 10-21-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1855; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2791; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3836*)

SECTION 73. 329 IAC 10-21-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-2 Sampling and analysis plan and program**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-20; IC 36-9-30

Sec. 2. (a) The owner, operator, or permittee shall carry out a ground water sampling and analysis program that is specified in an approved sampling and analysis plan, and that complies with the requirements of this rule. The sampling and analysis plan must address all items included in this section, where applicable, and it must satisfy the following requirements:

- (1) For all new MSWLFs permitted under this article, the sampling and analysis plan must be approved by the commissioner before the first sampling event occurs.
- (2) Existing MSWLFs that have not previously submitted an approved sampling and analysis plan that includes all applicable requirements of this section, must have a plan approved by the commissioner by one (1) of the following times, whichever occurs first:
  - (A) At the time of the next permit renewal application.
  - (B) At closure.
  - (C) At a time determined by the commissioner.
- (3) Existing MSWLFs that have, by the effective date of this article, submitted to the commissioner an approved sampling and analysis plan that does not include all applicable requirements of this rule, must submit a revised plan, if deemed necessary by the commissioner, by one (1) of the following times, whichever occurs first:
  - (A) At the time of the next permit renewal application.
  - (B) At closure.
  - (C) At a time determined by the commissioner.
- (4) Changes or additions to a previously approved sampling and analysis plan must be approved by the commissioner before the changes or additions are implemented.
- (5) The approved sampling and analysis plan must be retained at or near the MSWLF in the operating record or at an alternative location approved by the commissioner.
- (6) The sampling and analysis plan must include the following:
  - (A) A description of the following:
    - (i) The method that will be used to determine the sequence of sampling of ground water monitoring wells. The sequence determination must:
      - (AA) compare **ground water monitoring** wells that are not contaminated to those that are contaminated or to those that have the potential to be contaminated; and
      - (BB) follow the criteria described under subsection (b)(8).
    - (ii) The method of evacuation, including:
      - (AA) a description of the equipment and procedures to be used;
      - (BB) the method for calculating one (1) well volume at each well; and
      - (CC) the method for measuring the volume of water evacuated.
    - (iii) The equipment and procedures to be used in sample

collection during detection, assessment, and corrective action ground water monitoring programs, including, but not limited to:

- (AA) the sizes, number, and material of containers to be used for collection of samples; and
- (BB) the manufacturer, make, and model number of field meters for pH, Eh, and specific conductance.

(iv) Copies of the owner's manual for each type of meter used in the sampling procedures.

(B) The qualifications and minimum training that the owner, operator, or permittee will require of the ground water sampler or sampling crew.

(b) The sampling and analysis program and procedures must comply with the following:

(1) The sampling crew shall:

- (A) comply with requirements of state and federal agencies regarding worker safety;
- (B) wear latex gloves, vinyl gloves, or gloves made out of alternative material that has been approved by the commissioner whenever the samplers' hands are in proximity of:
  - (i) sample water;
  - (ii) open sample containers;
  - (iii) sampling equipment; or
  - (iv) the open **monitoring** well; and
- (C) avoid contact between gloves and samples.

(2) Each time ground water samples are collected from ground water monitoring wells at the monitoring boundary, **regardless of whether a map is produced as exempted in 329 IAC 10-21-1(p)(14)**, static water elevations must be:

- (A) obtained from each **ground water** monitoring well and each piezometer;
- (B) measured to the nearest one-hundredth (0.01) foot, and referenced to mean sea level; and
- (C) obtained as close in time as practical from each **ground water monitoring** well or piezometer prior to purging and sampling each **ground water monitoring** well.

If such a purging and collection sequence is expected to affect the accuracy of the static water elevation measurements in any other **ground water monitoring** well or piezometer in the ground water monitoring system, then water elevation measurements must be obtained prior to purging and sampling any **ground water monitoring** well.

(3) Samples that are to be analyzed for dissolved metals must be field filtered immediately after the sample is obtained from the **ground water** monitoring well using a forty-five hundredths (0.45) micron high capacity filter. Use of an alternative filter type or filter size must be approved by the commissioner.

(4) Static water in the **ground water** monitoring well must be removed with equipment that does not:

- (A) cause the water to cascade over the **ground water monitoring** well screen; or
- (B) cause strong gradients or excess volatilization of organic compounds in the ground water.

(5) The method of evacuation must be suited to the recharge of the ground water monitoring well, the well depth, and the well diameter, and must comply with one (1) of the following:

- (A) Evacuation may be accomplished with a pump. If a pump is used, the following requirements must be satisfied:
  - (i) The intake of the pump must be placed within, and ground water must be withdrawn from, the screened interval of the **ground water monitoring** well.
  - (ii) Purging with a pump must continue until a minimum of three (3) well volumes has been evaluated or the field constitu-

ents of pH, specific conductance, and temperature are stabilized within ten percent (10%) of a field determined mean reading for three (3) consecutive field readings to be completed as follows:

(AA) A minimum of six (6) samples must be taken for the required parameters.

(BB) Three (3) consecutive samples must be used to arrive at the field determined mean reading, and each of the next three (3) samples must be within ten percent (10%) of the field determined mean.

(CC) In the event that one (1) or more of the last three (3) samples are not within ten percent (10%) of the mean, the first sample will be deleted and a new field mean will be calculated from the next three (3) consecutive samples.

(DD) Additional samples are taken and the process described under subitem (CC) is continued until three (3) consecutive samples agree within ten percent (10%) of the field mean determined by the three (3) previous consecutive samples.

(EE) Purging a **monitoring** well by more than five (5) well volumes is prohibited.

(iii) When removing water from the **ground water monitoring** well for obtaining a sample, the pump must not be raised or lowered unless the potentiometric surface is as low as or lower than the top of the well screen.

(iv) A **ground water monitoring** well purged by a pump must be sampled by the same pump unless otherwise approved by the commissioner.

(v) If the permittee chooses to use a rotary pump, it must be used in accordance with the following:

(AA) The flow must be maintained at a slow and steady rate.

(BB) If the flow of water is intermixed with air during the use of the rotary pump, the pump must be lowered deeper into the water column or the sample collection must be accomplished with a bottom discharging bailer.

(CC) The interior of the pump must be coated with Teflon® or an inert material equivalent to Teflon® or be composed of stainless steel.

(vi) If the permittee chooses to use a positive gas displacement pump, it must be used in accordance with the following:

(AA) The flow must not be at a rate that forcefully ejects water or gas at the end of the expulsion cycle.

(BB) The generator must be placed downwind at least ten (10) feet from the **ground water monitoring** well being ~~monitored~~: **sampled**.

(vii) If the permittee chooses to use a peristaltic pump, it must be used in accordance with the following:

(AA) The peristaltic pump must only be used in a **ground water monitoring** well with a depth of thirty-three (33) feet or less.

(BB) Historical data and tubing manufacturer data sheets must be utilized to select the proper tubing for each site.

(CC) Water in the tubes must be evacuated between **ground water monitoring** wells.

(DD) The tubes must be decontaminated between **ground water monitoring** wells.

(B) Evacuation may be accomplished with a bailer. If a bailer is used, the following requirements must be satisfied:

(i) The **ground water monitoring** well must be purged a minimum of three (3) well volumes if the ground water recharge rate is greater than the ground water withdrawal rate.

(ii) The **ground water monitoring** well may be purged dry if the ground water recharge rate is less than the ground water withdrawal rate.

(iii) Purging a **ground water monitoring** well more than five (5) well volumes is prohibited.

(iv) The bailer must be made of Teflon®, PVC, stainless steel, or other material approved by the commissioner.

(v) To assure that volatile organics are not stripped from the water, the bailer must be lowered in a slow and steady manner until the top of the ground water is contacted.

(vi) The bailer must be lowered into the water column until the bailer is full or the base of the **ground water monitoring** well is contacted by the bottom of the bailer.

(vii) Once full of water, the bailer must be lowered no further into the water column.

(viii) The bailer cord must not touch or contact the water column.

(ix) To assure that volatile organics are not stripped from the water, the bailer must be withdrawn at a slow steady rate up the **ground water monitoring** well casing.

(x) When the bailer reaches the top of the **ground water monitoring** well riser, the bailer must be removed carefully to prevent aeration or agitation.

(xi) The bailer cord must be pulled away from the water when pouring from a top discharging bailer.

(C) The MSWLF's sampling and analysis plan must designate methods for disposal of purged water and decontamination solutions.

(D) The commissioner shall consider a **ground water monitoring** well to be dry under the following circumstances:

(i) The **ground water monitoring** well is not mechanically damaged, yet it is unable to deliver water when opened for sampling.

(ii) The **ground water monitoring** well does not have a recovery rate adequate to supply ground water for sampling within a twenty-four (24) hour period after the monitoring well is purged.

(E) A **ground water monitoring** well that is dry on a consistent basis may be deemed by the commissioner to be an improperly functioning **ground water monitoring** well. The owner, operator, or permittee may be required to replace or relocate any improperly functioning **ground water monitoring** well.

(6) Upon request, the commissioner may approve use of equipment or methods not specified in subdivision (5). The alternative equipment must provide equivalent evacuation efficiency and the request must include:

(A) an exact description of the purging or sampling apparatus;

(B) operational specifics of the apparatus; and

(C) an explanation of why the proposed sampling equipment is equivalent or superior to the equipment specified under subdivision (5) for:

(i) accuracy of readings;

(ii) minimization of cross contamination;

(iii) suitability of the equipment to the site; and

(iv) ease of decontamination, when applicable.

(7) Ground water monitoring sample collection for detection monitoring, verification resampling, assessment, and corrective action ground water monitoring programs must satisfy the following requirements:

(A) Each sample must be numbered and labeled as a separate sample.

(B) One (1) or more independent samples must be collected from every ground water monitoring well on-site or as otherwise specified by the commissioner.

(C) At least one (1) field duplicate sample must be collected as follows:

(i) A field duplicate sample is defined as an additional sample collected from a ground water monitoring well, where:

(AA) the additional sample is analyzed independently of the first sample obtained from that **ground water monitoring** well; and

(BB) the ground water quality results for the additional sample are not used in the statistical evaluation, unless approved by the commissioner.

(ii) The field duplicate sample must be treated in the same manner as the independent sample.

(iii) A field duplicate sample must be collected from one (1) **ground water monitoring** well for every ten (10) monitoring wells, or part thereof, sampled.

(iv) The field duplicate sample must not be identified as such to the laboratory performing the sample analysis.

(D) The first sample collected from a given **ground water monitoring** well must be listed on the field record as the independent sample. The additional sample from the given **monitoring** well must be listed on the field record as the field duplicate sample.

(E) The independent sample and the field duplicate sample must be collected consecutively. The equipment for obtaining the samples does not require decontamination between sample collection; however, the independent sample and the field duplicate sample must be analyzed independently of each other.

(F) At least one (1) trip blank sample must be taken and must meet the following requirements:

(i) Be containerized prior to entering the MSWLF.

(ii) Consist of water that is:

(AA) distilled;

(BB) deionized; or

(CC) laboratory grade water.

(iii) Be analyzed for all constituents required for the sampling event unless a justification for limiting the trip blank to specific constituents is submitted to and approved by the commissioner.

(iv) Accompany the independent samples at all times.

**(v) The trip blank must be identified as such to the laboratory performing the sample analysis.**

(G) At least one (1) equipment blank sample must be collected from each piece of nondedicated equipment used to collect samples at the site, in accordance with the following:

(i) The water used for the equipment blank sample collection must be either distilled water or deionized water.

(ii) The equipment to be sampled must include:

(AA) all nondedicated pumps and bailers;

(BB) intermediate containers;

(CC) probes used for measuring static water levels, if the probe is inserted into the **ground water monitoring** well after the well is purged; and

(DD) reusable sections of the field filtration equipment.

(iii) The equipment blank must be analyzed for all constituents required by the sampling event unless a justification for limiting the equipment blank to specific constituents is submitted to and approved by the commissioner.

(iv) The equipment blank must be obtained after the last **ground water** monitoring well has been sampled.

**(v) The equipment blank must be identified as such to the laboratory performing the sample analysis.**

(H) At the end of each sampling day, the sampler may collect at

least one (1) field blank sample. If a field blank sample is collected, the following criteria must be met:

(i) The water used for the sample must be distilled water or deionized water brought onto the site and poured into the designated sample bottles within fifty (50) feet from any ground water monitoring well sampled the day the field blank is collected.

(ii) Field blank samples must be analyzed for all constituents required for the sampling event unless a justification for limiting the field blank to specific constituents is submitted to and approved by the commissioner.

**(iii) The field blank must be identified as such to the laboratory performing the sample analysis.**

(8) Ground water samples must be collected in a sequence that satisfies the following:

(A) **Ground water monitoring** wells must be sampled in a sequence that minimizes the potential for cross contamination of samples. Historical ground water quality data must be used in estimating a well's potential for contamination. Samples must be collected in order of increasing likelihood of contamination in the **monitoring** well supplying the sample as follows:

(i) All **upgradient background** ground water monitoring wells must be sampled before downgradient wells.

(ii) If downgradient **ground water monitoring** wells have not been verified to be contaminated, samples must be collected first from those downgradient **monitoring** wells that are furthest from disposed solid waste, followed by **monitoring** wells that are increasingly close to disposed solid waste.

(iii) Downgradient **ground water monitoring** wells that have been verified as contaminated must be sampled in sequence, starting with those downgradient **monitoring** wells that have the lowest level of contaminants, followed by **monitoring** wells that have increasingly higher levels of contaminants.

(B) Samples must be collected in a sequence that minimizes volatilization of compounds. Samples must be collected in order of decreasing volatility as follows:

(i) For the constituents listed in section 15(a) of this rule (Table 1A) and section 15(b) of this rule (Table 1B):

(AA) volatile organic compounds;

(BB) field pH;

(CC) field specific conductance;

(DD) dissolved metals; and

(EE) all other constituents.

(ii) For the constituents listed in section 16 of this rule (Table 2):

(AA) volatile organic compounds;

(BB) field pH;

(CC) field specific conductance;

(DD) semivolatile organics;

(EE) dissolved metals;

(FF) total metals; and

(GG) all other constituents.

(C) A sample collection sequence for the constituents listed in section 15(a) of this rule (Table 1A), section 15(b) of this rule (Table 1B), and section 16 of this rule (Table 2) must be developed for use in the event that a ground water monitoring well cannot supply sufficient water volume to collect a full sample. To establish the sample collection sequence, the owner, operator, or permittee shall consider:

(i) **ground water monitoring** well logs; and

(ii) previous sample data.

(9) All nondedicated equipment must be decontaminated in accordance with the following requirements:

(A) Decontamination procedures must be implemented after sample collection at each **ground water monitoring** well and before reuse of the equipment. Time of decontamination must be indicated on the field report sheet. The commissioner may approve alternate decontamination procedures that provide equally reliable prevention of cross contamination.

(B) If a rotary pump is used, then the following decontamination procedures must be implemented:

(i) The interior, exterior, and tubing must be decontaminated.  
 (ii) The exterior of the rotary pump must be washed with a nonphosphate detergent and potable water bath. The exterior of the rotary pump must be rinsed in potable water and double rinsed in deionized or distilled water.

(iii) The pump must have a volume of a nonphosphate detergent water mixture pumped through the system equal to one-third (a) of the previous **ground water monitoring** well's purge volume or two (2) gallons, whichever is less, to remove all pumped water from the internal parts. This solution must be pumped through the pump head and then continued through the tubing until ejected from the system.

(iv) A gross rinse of potable water must follow the detergent mixture specified in item (iii). The rinse water volume must match the volume specified in item (iii).

(v) If samples are acquired from the pump, a minimum of three (3) gallons of distilled or deionized water rinse must be pumped through the system prior to sampling the next **ground water monitoring** well.

(vi) The commissioner may approve an alternative decontamination procedure provided the alternative procedure yields equally reliable prevention of cross contamination.

(C) If a peristaltic pump is used, then the following decontamination procedures must be implemented:

(i) The tubing must be decontaminated.  
 (ii) After each water sample passes through the pump, a volume of distilled or deionized water and nonphosphate detergent solution equal to the sample volume must be immediately passed through the pump.  
 (iii) The detergent solution must be followed by a potable water rinse. The volume of the rinse must be three (3) times the detergent solution volume.

(D) If a bailer is used, then the following decontamination procedures must be implemented:

(i) Proper equipment must be utilized to decontaminate the internal, external, and valve components of the bailer.  
 (ii) Nondedicated bailers must be decontaminated on-site prior to obtaining samples from the next **ground water monitoring** well. Decontamination must consist of, in the following order:

(AA) Washing the interior and exterior surfaces of the bailer with a nonphosphate detergent solution.

(BB) Rinsing with potable water.

(CC) Final double rinsing with distilled or deionized water.

(iii) Dedicated bailers that are either stored at a site away from the sampling point, or stored in the **ground water monitoring** well riser and above the maximum ground water level must be double rinsed with distilled or deionized water prior to use. Bailers must not be stored below the ground water level in the **monitoring** well.

(iv) Teflon® coated wire and any water level probe must be:

(AA) submerged in a nonphosphate detergent bath;

(BB) abraded by a clean cloth as the wire is removed from the wash bath;

(CC) deposited into a gross rinse bath of potable water; and  
 (DD) lifted as a coil and placed in a final distilled or deionized water rinse.

(v) A rope attached to the bailer or lead wire must not be reused.

(E) Meters that measure for specific conductance, temperature, Eh, and pH must be washed with a nonphosphate detergent solution and rinsed with a volume of deionized water equal to a minimum of four (4) times the volume used by the meter for effective readings, unless nonphosphate detergent will inhibit the meter's ability to function properly.

(10) **Ground water** monitoring well samples must be collected in containers that are specified in either the MSWLF's sampling and analysis plan or the quality assurance project plan described in subdivision (13). The commissioner may establish guidance regarding the following:

(A) Recommended preservatives.

(B) Bottle material composition.

(C) Minimum sample volumes.

(D) Refrigeration after sample collection.

(E) The prevention of exposure to direct radiation.

(11) Field meters for pH, Eh, and specific conductance must be as follows:

(A) have accuracy of readings that do not vary more from a standard value than the following:

(i) Three percent (3%) of the reading for a suitable standard for specific conductance.

(ii) Twenty-five (25) millivolts of the indicator solution for Eh.

(iii) One-tenth (0.1) standard unit of the calibration standard value for pH.

(B) be calibrated at the beginning and end of each day of a sampling event, or more frequently if recommended by a manufacturer's specifications, in accordance with the following:

(i) The calibration solutions of high, low, and midrange values must be retained on-site during the sampling event for potential use at every sampling point.

(ii) Calibrations must be conducted as specified by the manufacturer of the equipment.

(12) The sampler shall submit to the commissioner a field report for every sampling event. The report must include the following information pertaining to each ground water monitoring well **and piezometer, when applicable**:

(A) The time and date each **ground water monitoring** well was purged and sampled.

(B) The location of each **ground water monitoring** well that was sampled, including indicating the **monitoring** well as **upgradient background** or **downgradient** of the solid waste boundary.

(C) The condition of **ground water monitoring** well heads **and piezometers** and monitoring well security devices.

(D) The weather conditions during sample collection.

(E) The condition of purged water with regard to odor and turbidity, and the condition of the collected sample.

(F) The in situ temperature, in degrees Celsius, of the ground water as measured in line or immediately after removal of water from the **ground water monitoring** well.

(G) The static water elevations referenced to mean sea level and measured to the nearest one-hundredth (0.01) foot.

(H) The type of equipment used for purging and for collection of samples and, where applicable, the cord's chemical composition.

(I) A copy of the chain of custody for the sample.



(J) The location and elevation of the referenced measuring mark on the **ground water monitoring well and piezometer** casing used to measure the static water elevations.

(K) The time equipment was decontaminated at each **ground water monitoring well** location.

(L) The reaction of the ground water to the preserving agent when the sample is containerized.

(M) Additional information as required by the commissioner.

(13) The owner, operator, or permittee of an MSWLF shall develop a quality assurance project plan and submit the following items to the commissioner for approval:

(A) Documentation to verify that all laboratories performing ground water sample analysis intend to comply with the minimum standards set forth in the facility's quality assurance project plan.

(B) One (1) scientifically valid and accurate testing method approved by the commissioner for each constituent required for analysis under this rule.

(14) Each owner, operator, or permittee of an MSWLF shall develop and utilize a chain of custody protocol to account for the possession and security of any sample from the time the sample is taken until the analytical results are received by the commissioner. The chain of custody protocol must conform with the following:

(A) The field chain of custody form must account for the sample from the time the sample is removed from the **ground water monitoring well** until the time the sample is delivered to the laboratory and the sample custodian of the analytical laboratory signs the field chain of custody form.

(B) The laboratory chain of custody form must account for the location and security of the sample from the sample's arrival at the analytical laboratory until the analysis of the sample is found to be acceptable under the quality assurance plan.

(C) Field and laboratory chain of custody forms must identify each sample with its unique identifying number and include the following information:

- (i) The number and types of containers holding the sample.
- (ii) The names of all persons having contact with the sample, including those persons collecting or transporting the sample.
- (iii) The time and dates of any transfers in possession of a sample.
- (iv) The condition of the sample at the time of its arrival at the laboratory, including the condition of the sample's seal and the temperature inside each cooler holding a sample.

(D) In addition to the information required under clause (C), the field chain of custody form must include a task sheet that delineates the analysis to be performed on the sample or samples.

(E) The laboratory must maintain the laboratory chain of custody form and, upon request, release the laboratory chain of custody form to the commissioner. The field chain of custody form must be submitted to the commissioner in accordance with section 1(t) of this rule.

(c) Upon request, the commissioner may approve the use of methods, procedures, or equipment not specified in subsection (b). The alternative methods, procedures, or equipment must provide results or measurements that are equivalent in accuracy and reliability and the request must include the following:

- (1) an exact description of the alternative methods, procedures, or equipment; and
- (2) an explanation of why the proposed methods, procedures, or equipment are equivalent or superior to those specified under subsection (b).

(Solid Waste Management Board; 329 IAC 10-21-2; filed Mar 14,

1996, 5:00 p.m.: 19 IR 1858; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2794; errata filed Jun 10, 1998, 9:23 a.m.: 21 IR 3939; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3839)

SECTION 74. 329 IAC 10-21-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-4 Ground water monitoring well and piezometer construction and design**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 4. (a) Ground water monitoring wells and **piezometers** installed after the effective date of this article must comply with the requirements of this section.

(b) The following drilling techniques must be used to ensure proper ground water monitoring well construction:

(1) The method of drilling a borehole for a **ground water monitoring well** or for exploration must be selected to ensure the following:

- (A) Subsurface materials are not adversely affected.
- (B) Ground water or aquifers are not contaminated or cross-contaminated.
- (C) Quality continuous unconsolidated and consolidated material samples are collected.
- (D) Equipment sensitivity allows adequate determination of an appropriate screen location.
- (E) The diameter of the borehole is at least four (4) inches larger than the diameter of the **ground water monitoring well** casing and screen, to allow tremie placement of the filter pack and annular sealants.
- (F) Drill fluids other than water ~~fluid additives, or lubricants~~ are to be avoided. However, if ~~they~~ **fluid additives or lubricants** are unavoidable, those used must be demonstrated to be inert and an impact statement must be made regarding the potential impact of any liquids introduced into the borehole concerning the physical and chemical characteristics of the subsurface and ground water.

(2) All equipment that will encounter formation materials must be decontaminated prior to drilling each new borehole.

(c) Casing and screen materials must comply with the following:

- (1) Casing and screen materials must be chosen to:
  - (A) be resistant to corrosion and degradation in any natural or contaminated environment;
  - (B) be resistant to physical damage as a result of installation, usage, and time; and
  - (C) have minimal effect on ground water chemistry with respect to the analytes of concern.
- (2) The casing sections must be physically joined and made watertight by:
  - (A) heat welding;
  - (B) threading; or
  - (C) force fitting.
- (3) The use of solvents, glues, or other adhesives to join casing sections is prohibited.
- (4) **For ground water monitoring wells**, the casing must be two (2) inches in diameter or greater; **for piezometers not to be used for sample collection, the diameter must be one (1) inch or greater.**
- (5) Except for open borehole bedrock **ground water monitoring wells**, screens are required for all ground water monitoring wells and **piezometers** and must include the following:
  - (A) The screens must be continuous slot wire or machine slotted.

(B) Slot size must retain ninety percent (90%) to one hundred percent (100%) of the filter pack material.

(C) Screen lengths must be not less than two (2) feet and not greater than ten (10) feet unless approved by the commissioner.

(6) **Ground water monitoring well and piezometer** casing and screens must be cleaned prior to introduction into the borehole to prevent manufacturers' residues and coatings from contaminating the borehole or aquifer.

(7) Screen and casing must be properly centered in the borehole prior to filling the annulus.

(d) Procedures for collecting, analyzing, and storing core samples must comply with the following:

(1) Continuous downhole samples of the unconsolidated and consolidated materials must be collected in all ground water monitoring well **and piezometer** boreholes **unless the ground water monitoring wells or piezometers are replacement monitoring wells or piezometers under 329 IAC 10-21-1(g)(2)**. For monitoring well clusters **or piezometer clusters**, continuous samples must be collected from the surface to the base of the deepest **monitoring well or piezometer**; other **monitoring wells or piezometers** within the cluster must be sampled at all significant stratigraphic changes and at the screened interval. Samples must not be combined into composite samples for classification or testing.

(2) All procedures regarding testing and sampling must be described to the commissioner in writing.

(3) The owner, operator, or permittee shall:

(A) retain all borehole samples in labeled containers or labeled core boxes that are securely stored and accessible for a period of:

- (i) seven (7) years after the samples are collected; or
- (ii) seven (7) years after permit issuance;

whichever occurs later;

(B) notify the commissioner, in writing, of the location of the core sample storage; and

(C) ensure that core samples are available for inspection, by the commissioner or by a representative of the department, at all reasonable times or during normal operating hours.

(4) Each significant stratum encountered in the borehole must have the following analysis performed and testing results must be identified with respect to sample elevations and borehole:

(A) Complete grain size using the following techniques:

- (i) Sieve.
- (ii) Hydrometer.

(B) Cation exchange capacity.

(C) Hydraulic conductivity if the information for that strata is not available to the satisfaction of the commissioner.

(D) Atterberg limits.

(e) The ground water monitoring well **or piezometer** annulus must be filled as follows when drilling is complete:

(1) The annular space from six (6) inches below the well screen to two (2) feet above the well screen must be filled with a filter pack consisting of inert sand or gravel and shall comply with the following:

(A) A uniform grain size must be chosen to reflect three (3) to five (5) times the average fifty percent (50%) retained size of the formation material unless this filter pack grain size would impede adequate flow of ground water into the **ground water monitoring well or piezometer**. Should this happen, a filter pack grain size shall be used that allows ground water flow into the **monitoring well or piezometer** and prevents as much silt infiltration as possible.

(B) Natural material may be an acceptable constituent of the filter pack if slump is unavoidable.

(C) The filter pack in a bedrock **monitoring well or piezometer** is optional. However, if used, the filter pack must be of a nonreactive coarse sand or gravel.

(D) The upper one (1) to two (2) feet of the filter pack must be of fine, inert sand to prevent infiltration of seal materials.

(E) The filter pack must be emplaced without bridging, preferably by tremie pipe, or other methods as approved by the commissioner.

(2) A bentonite seal of at least three (3) feet must be emplaced by tremie pipe in the annular space directly above the filter pack.

(3) The annular space from the bentonite seal to one (1) foot below the frost line must be tremied with a grout of bentonite, cement/bentonite, or other shrinkage-compensated, low permeability fill and shall include the following:

(A) All bentonite and cements must be mixed to the manufacturer's specifications.

(B) Full hydration, curing, or setting of the bentonite seal must occur prior to further backfilling as required by this subdivision.

(4) A surface seal of neat cement or concrete must be installed in the remaining borehole annular space above the intermediate fill, including the following:

(A) The apron of the surface seal must be designed to prevent ponding and infiltration by extending at least two and five-tenths (2.5) feet from the **ground water monitoring well** casing.

(B) The apron must slope at least fifteen (15) degrees outward.

(C) A locking protective metal casing must be installed around the **ground water monitoring well** casing and be anchored below the frost line in the surface seal.

(D) A vent hole or vented cap must be placed at the top of the **ground water monitoring well or piezometer** casing to allow accurate piezometric variation and to prevent gas build-up.

(E) The annular space between the **ground water monitoring well** casing and the protective metal casing must be neat cement filled to a level at least one (1) inch higher than that of the surrounding apron.

(F) A drainage hole must be drilled in the protective metal casing immediately above the cement fill specified in clause (E).

(G) The remaining annular space between the **ground water monitoring well** casing and the protective metal casing must be filled with a fine gravel.

(H) A weather resistant lock must be dedicated to the **ground water monitoring well** and must be serviced twice a year and when the **ground water monitoring well** is sampled.

(I) A permanent unique identification must be affixed to each ground water monitoring well and the identification must be visible.

(J) Three (3) foot bumper guards or other suitable protection may be required by the commissioner to prevent vehicular traffic from damaging the protective metal casing.

(f) The permittee shall provide ten (10) days' advance notification of the date and time of the installation of the monitoring wells **or piezometers**.

(g) Development of ground water monitoring wells must occur as soon as possible after the seal and grout have set and must conform with the following:

(1) All **ground water** monitoring wells must be developed in such a way as to:

(A) allow free entry of formation water;

(B) minimize turbidity of the sample; and

(C) minimize clogging of the **monitoring wells**.

(2) Development methods chosen must be appropriate for the stratigraphic conditions.

(3) An in situ hydraulic conductivity test must be performed after the **ground water monitoring** well has been properly developed.

(h) Diagrammatical borehole drilling logs for all ground water monitoring wells **and piezometers** must be of similar scale and include the following information:

(1) The monitoring well **or piezometer** and borehole identification.

(2) The date of drilling.

(3) The method of drilling.

(4) The borehole diameter.

(5) The method of obtaining consolidated material and unconsolidated material.

(6) The type of any drill fluids, fluid additives, or lubricants other than water that have been used.

(7) Penetration measurements, such as hammer blow counts, penetrometer measurements, or other acceptable penetration measurements.

(8) The sample recovery measured to the nearest one-tenth (0.1) foot.

(9) Consolidated material and unconsolidated material field descriptions, including the following information:

(A) Lithology and sedimentology.

(B) Mineralogy.

(C) Degree of cementation.

(D) Degree of moisture.

(E) Color as referenced from soil color charts such as the Munsell soil charts.

(F) Grain size and textural classification of unconsolidated samples as referenced from the United States Department of Agriculture textural classification charts. Grain-size divisions shall be based on a modified form of the Wentworth grain-size scale defined under 329 IAC 10-2-206.3. A determination shall be made of the percentage and grades of coarse fragments greater than two (2) millimeters in size based on 329 IAC 10-2-206.3 in addition to the USDA textural classification. Consolidated samples must be described using accepted geological classification systems and nomenclature. A clear description of the classification system used must be included with the logs.

(G) Any other physical characteristics of the consolidated material and unconsolidated material such as scent, staining, fracturing, and solution features.

(H) The percent recovery and rock quality designation.

(I) Other primary or secondary features.

(J) Drilling observations and appropriate details required for unconsolidated drilling logs.

(K) A clear photograph of all consolidated cores, labelled with:

(i) the date the photograph was taken;

(ii) the sample interval;

(iii) the reference scale;

(iv) the reference color scale; and

(v) the identification of the borehole.

(L) Interval of continuous samples and unconsolidated material test data.

(10) Distance to and depth of any water bearing zones, measured to the nearest one-hundredth (0.01) foot.

(11) Static water elevations measured to the nearest one-hundredth (0.01) foot and indicating the dates and times the measurements were taken.

(12) The elevation of permanent **monitoring** wells **or piezometers** at the ground surface to the nearest one-tenth (0.1) foot, with the

referenced measuring mark measured to the nearest one-hundredth (0.01) foot relative to the National Geodetic Vertical Datum.

(13) The horizontal location of permanent monitoring wells **or piezometers** measured to the nearest thirty (30) cm using Universal Transverse Mercator (UTM) coordinates.

(14) Total borehole depth and elevation measured to the nearest one-hundredth (0.01) foot.

(15) Elevation range of screened interval measured to the nearest one-hundredth (0.01) foot.

(i) ~~Diagrammatical construction and design logs of The construction details and diagrams of~~ all pertinent ground water monitoring wells must **be recorded on logs and** include the following information:

(1) The monitoring well identification and UTM coordinates as described under subsection (h)(13).

(2) The composition of **monitoring** well and protective casing materials.

(3) The type of joints and couplings between **monitoring** well casing segments.

(4) The elevations of the ground ~~water~~ surface to the nearest one-tenth (0.1) foot and of the referenced measuring mark at the top of the **monitoring** well casing measured to the nearest one-hundredth (0.01) foot relative to the National Geodetic Vertical Datum.

(5) The diameter of **monitoring** well casing and borehole.

(6) The elevation of the bottom of the borehole and the depth of the borehole measured to the nearest one-hundredth (0.01) foot.

(7) The screen slot size.

(8) The elevation range of the screened interval measured to the nearest one-hundredth (0.01) foot.

(9) The screen length measured to the nearest one-hundredth (0.01) foot.

(10) Methods of installation of the annular fill.

(11) The elevation range and the depth of the filter pack measured to the nearest one-hundredth (0.01) foot.

(12) The length of the filter pack.

(13) The grain size and composition of all filter pack materials and the fifty percent (50%) retained size of the formation material used to determine filter pack materials.

(14) The elevation and depth range of the bentonite seal above the filter pack measured to the nearest one-hundredth (0.01) foot.

(15) The thickness of the bentonite seal above the filter pack.

(16) The composition of annular fill.

(17) The elevation range, depth range, and thickness of annular fill measured to the nearest one-hundredth (0.01) foot.

(18) The composition and design of the surface seal.

(19) The design and composition of materials used for the protection of the **monitoring** well casing.

**(j) The construction details and diagram of each piezometer must be recorded on the logs and include the following:**

**(1) Piezometer identification number and UTM coordinates.**

**(2) Elevation of the top of the piezometer casing.**

**(3) Height of piezometer casing above the ground.**

**(4) Elevation of the ground surface.**

**(5) Elevation and depth to the bottom of the borehole.**

**(6) Diameter of piezometer casing and borehole.**

**(7) Elevation and depth to the bottom and top of the piezometer screen.**

**(8) Length of piezometer casing.**

**(9) Composition of piezometer casing materials and piezometer screen material.**

**(10) Length of piezometer screen.**

- (11) Screen slot size.
- (12) Type of joints or couplings, or both, between casing segments.
- (13) Elevation and depth to the top and bottom of the gravel filter pack surrounding the piezometer screen.
- (14) Length of the gravel filter pack.
- (15) Elevation and depth of the bottom of the piezometer casing.
- (16) Elevation and depth of the top and bottom of the seal above the gravel filter pack.
- (17) The grain size and composition of all filter pack materials and the fifty percent (50%) retained size of the formation material used to determine filter pack materials.
- (18) Thickness of the seal above the gravel filter pack.
- (19) Elevation and depth of the annular seal above the gravel filter pack seal.
- (20) Thickness of the annular seal.
- (21) Material used for the annular seal.
- (22) Method of installation of the annular seal.
- (23) The composition and design of the surface seal.

(Solid Waste Management Board; 329 IAC 10-21-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1864; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2046; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2799; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3845)

SECTION 75. 329 IAC 10-21-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-6 Statistical evaluation requirements and procedures**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-20; IC 36-9-30

Sec. 6. (a) The owner, operator, or permittee shall determine if there is a statistically significant increase for each constituent analyzed, except for constituents listed in section 15(b) of this rule (Table 1B). This statistical evaluation is required each time ground water is collected and analyzed at the monitoring boundary for all MSWLFs.

(b) To determine a statistically significant increase compared to the background ground water quality, each constituent from each ground water monitoring well sample must be compared to the background ground water quality of that constituent, according to the statistical procedures and performance standards specified in this section.

(c) The owner, operator, or permittee shall submit to the commissioner for approval a written statistical evaluation plan for each ground water monitoring program required under this rule. Submittal of the plan must comply with the following:

- (1) For all new MSWLFs and lateral expansions to be permitted under this article, the plan must be submitted before the first sampling event occurs following permit issuance or as otherwise specified by the commissioner.
- (2) For existing MSWLFs, the plan must be submitted with the next renewal application, at the time of closure, or as specified by the commissioner, whichever occurs first, unless a statistical evaluation plan that includes all applicable requirements under this section has been previously submitted.
- (3) The plan must explain which of the various statistical methods, described in subsection (f), may be needed to address a continuously expanding ground water data base. All statistical methods must meet the performance standards outlined in subsection (g).
- (4) The plan must identify the statistical procedures to be used whenever verification resampling, as specified under section 8 of this rule, is implemented.

(5) The plan must identify any computer data management or statistical evaluation program used by the owner, operator, or permittee and, upon request by the commissioner, include appropriate documentation of the computer program.

(d) Changes to the statistical evaluation plan must not be implemented without approval from the commissioner.

(e) The owner, operator, or permittee shall submit a statistical evaluation report of the ground water sample analysis to the commissioner. The report must be submitted within sixty (60) days after obtaining ground water samples from the ground water monitoring wells, unless a verification resampling program described under section 8 of this rule, is implemented. The statistical evaluation report must include the following:

- (1) All input data, output data, and equations used for all calculations and statistical tests utilized.
- (2) A detailed discussion of the conclusions from the statistical evaluation. This discussion must include the identification of all constituents found to have a statistically significant increase.
- (3) A graphical representation of the MSWLF's ground water data when requested by the commissioner. The commissioner shall provide guidance in preparing graphics.

(f) Any of the following statistical procedures may be chosen for the statistical evaluation, provided the chosen statistical procedure is capable of meeting the performance standards in subsection (g):

- (1) A parametric analysis of variance (ANOVA) followed by multiple comparison procedures to identify a statistically significant increase. The method must include estimation and testing of the contrasts between each downgradient ground water monitoring well's mean and the background mean levels for each constituent.
- (2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each downgradient ground water monitoring well's median and the background ground water quality median levels for each constituent.
- (3) A tolerance or prediction interval in which an interval for each constituent is established from the distribution of the background ground water quality data, and the level of each constituent in each downgradient ground water monitoring well for the most recent sampling event is compared to the upper tolerance limit or upper prediction limit.
- (4) A control chart, which establishes control limits for each constituent.
- (5) A temporal or spatial trend analysis.
- (6) Another valid statistical test method that meets the performance standards of subsection (g).

(g) The statistical procedures and methods used must comply with the following performance standards:

- (1) The statistical procedure used to evaluate ground water monitoring data must be appropriate for the data distribution of each constituent. If the data distribution of a constituent is shown to be inappropriate for a normal theory test, then either the data must be transformed or a distribution-free statistical test must be used. If data distributions for the constituents differ, more than one (1) statistical method may be needed.
- (2) If ground water data from an individual **ground water** monitoring well is compared either to background ground water quality, which may include pooled **upgradient ground water background**

monitoring well data from more than one (1) well, or to a ground water protection standard, then the test must be done at a Type I error level that is no less than one-hundredth (0.01) for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period must be no less than five-hundredths (0.05); however, the Type I error rate of no less than one-hundredth (0.01) for individual **monitoring** well comparisons must be maintained. This performance standard does not apply to:

- (A) tolerance intervals;
- (B) prediction intervals; and
- (C) control charts.

(3) The validity of the statistical test used must be evaluated prior to applying the method to the ground water data. This evaluation must address:

- (A) the error potential for false positives and false negatives; and
- (B) any other evaluation deemed necessary by the commissioner.

(4) If a control chart is used to evaluate ground water monitoring data, the specific type of control chart and associated statistical parameter values must be protective of human health and the environment. These values must be determined after considering:

- (A) the number of background samples;
- (B) the background data distribution; and
- (C) the range of background concentrations for each constituent analyzed.

(5) If a tolerance interval or a prediction interval is used to evaluate ground water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, must be protective of human health and the environment. These statistical parameters must be determined after considering:

- (A) the number of background samples;
- (B) the background data distribution; and
- (C) the range of background concentrations for each constituent analyzed.

(6) The statistical method must account for data below the limit of detection with one (1) or more statistical procedures. Any practical quantitation limit that is used in a statistical procedure must:

- (A) be the lowest concentration limit that can be repeatedly and reliably achieved; and
- (B) be within specified limits of precision and accuracy during routine laboratory operating conditions.

(7) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability.

*Solid Waste Management Board; 329 IAC 10-21-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1866; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2802; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3848)*

SECTION 76. 329 IAC 10-21-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-7 Detection ground water monitoring program**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 7. (a) A detection ground water monitoring program that satisfies the following requirements is required for all MSWLFs:

(1) Within the six (6) months following the scheduled date of compliance that is specified in section 1(a) of this rule, a minimum of four (4) independent background samples from each approved ground water monitoring well must be collected and analyzed for the constituents listed in section 15(a) of this rule (Table 1A). If a background data base, comprising data from every monitoring well approved by the commissioner and every constituent listed in section

15(a) of this rule (Table 1A), has been previously established, then additional independent samples are not required for the purpose of establishing background.

(2) Any **ground water monitoring** well installed after the scheduled date of compliance specified in section 1(a) of this rule and designated for detection monitoring must have minimum number of independent samples collected and analyzed for the constituents listed in section 15(a) of this rule (Table 1A). The minimum number of independent samples must satisfy the chosen statistical procedures and performance standards under section 6 of this rule.

**(3) Within the six (6) months following the scheduled date of compliance that is specified in section 1(a) of this rule, a minimum of four (4) independent background samples from each approved ground water monitoring well must establish background for Arsenic (dissolved) as listed in section 15(a) of this rule (Table 1A). If a background data base, comprising data from every monitoring well approved by the commissioner and every constituent listed in section 15(a) of this rule (Table 1A), has been previously established, then additional independent samples are not required for the purpose of establishing background.**

~~(4)~~ (4) Subsequent sampling events during the active life, closure, and post-closure periods of the MSWLF must include the collection and analysis of at least one (1) independent sample from each approved **ground water** monitoring well. These samples must be analyzed for all constituents in section 15 of this rule (Table 1A and Table 1B). The detection monitoring frequency must be at least semiannual during the active life, closure, and post-closure periods.

~~(5)~~ (5) The commissioner may specify an alternative frequency for detection monitoring that must comply with the following:

- (A) The alternative frequency must be no less than annual.
- (B) The alternative frequency must be based on consideration of the following factors:
  - (i) Sedimentology of the aquifer and unsaturated zone.
  - (ii) Hydraulic conductivity of the aquifer and unsaturated zone.
  - (iii) Ground water flow rates.
  - (iv) Minimum distance between the upgradient permitted solid waste boundary and the downgradient ground water monitoring well screen.
  - (v) Resource value of the aquifer.
  - (vi) The fate and mode of transport of any constituents detected in response to detection monitoring.
  - (vii) Constituent concentrations recorded at the date of alternative frequency selection.

~~(6)~~ (6) The owner, operator, or permittee must determine, based on the results of sample collection and analysis performed in accordance with this subsection, whether any statistically significant increase in concentration has occurred for any constituent listed in section 15(a) of this rule (Table 1A). In order to make this determination, the owner, operator, or permittee must compare the samples to:

- (A) background ground water quality;
- (B) a ground water protection standard that has been established from a previous assessment ground water monitoring program conducted under section 10 of this rule; or
- (C) a ground water protection standard that was established under 329 IAC 2-16-10, which was repealed in 1996.

(b) If a ~~statistically significant increase~~ **preliminary exceedance** in a constituent concentration has been determined, through ground water detection monitoring performed in accordance with subsection (a), the owner, operator, or permittee must accomplish the following:

(1) Notify the commissioner within fourteen (14) days of the determination. The notification must include the following:

(A) Those constituents listed in section 15(a) of this rule (Table 1A) for which a ~~statistically significant increase~~ **preliminary exceedance** in concentration has been observed and the last recorded concentration for each of those constituents.

(B) The identification of each ground water monitoring well where a ~~statistically significant increase~~ **preliminary exceedance** was observed.

(C) Whether verification procedures and sampling as described under section 8 of this rule will be pursued.

(2) Establish, within ninety (90) days of determination of a statistically significant increase, an assessment ground water monitoring program that meets the requirements of section 10 of this rule unless the owner, operator, or permittee chooses:

(A) to institute a verification program, pursuant to section 8 of this rule; or

(B) to demonstrate, pursuant to section 9 of this rule.

(c) A corrective action program may be required during a detection monitoring program if a ~~verified statistically significant increase~~ **preliminary exceedance** is **verified and is** attributable to the MSWLF and is an increase over either of the following:

(1) A ground water protection standard that has been established from a previous assessment ground water monitoring program conducted under section 10 of this rule.

(2) A ground water protection standard that was established under 329 IAC 2-16-10, which was repealed in 1996, for any constituent listed in section 15(a) of this rule (Table 1A).

(d) If, pursuant to subsection (c), the commissioner determines that a corrective action program is necessary, the owner, operator, or permittee must notify all pertinent local government officials of this determination.

(e) If the field pH for any ground water sample obtained at the monitoring boundary is determined to be above ten (10) or below five (5) standard pH units, the owner, operator, or permittee shall:

(1) within fourteen (14) days of the determination, notify the commissioner, in writing, of the identity of the **ground water monitoring** well or wells whose samples indicated an anomalous pH level, and of the corresponding pH values of those samples; and

(2) within sixty (60) days of the determination, submit a written report explaining the anomalous pH values to the commissioner. After reviewing the report, the commissioner may determine that an assessment ground water monitoring program, described under section 10 of this rule, is necessary.

*(Solid Waste Management Board; 329 IAC 10-21-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1868; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2046; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2803; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3849)*

SECTION 77. 329 IAC 10-21-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-8 Verification of a statistically significant increase in constituent concentration**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3

Affected: IC 13-20; IC 36-9-30

Sec. 8. (a) The owner, operator, or permittee shall develop a verification resampling and analysis plan that will provide verification

that a ~~statistically significant increase~~ **preliminary exceedance** has occurred in the concentration of one or more constituents during detection or assessment monitoring programs. This plan must:

(1) use the statistical procedures and performance standards described in section 6 of this rule to determine:

(A) the number of resamples that must be collected for verification of a ~~statistically significant increase~~ **preliminary exceedance** in constituent concentration; and

(B) the number of resamples that must fail in order to verify the ~~statistically significant increase;~~ **preliminary exceedance;**

(2) identify the MSWLF-wide false positive rate and the per-comparison false positive rate;

(3) demonstrate that there is an acceptable balance between the false positive rate and the false negative rate;

(4) be approved by the commissioner prior to implementation; and

(5) after approval by the commissioner, be incorporated into the statistical evaluation plan.

(b) Until the owner, operator, or permittee obtains approval for a proposed verification resampling and analysis plan, a minimum of two (2) independent samples must be collected when verification of a statistically significant increase is attempted.

(c) Until the owner, operator, or permittee obtains approval for a verification resampling plan, the commissioner shall consider ~~an observed statistically significant increase~~ **a preliminary exceedance** to be verified if:

(1) any of the verification resamples confirm a statistically significant increase over background ground water quality; or

(2) the owner, operator, or permittee chooses not to institute a verification resampling program.

(d) Within fourteen (14) days following the verification resampling determination, the owner, operator, or permittee shall notify the commissioner, in verbal or written format, of the following:

(1) The results of the verification resampling and analysis program.

(2) An intention, on the part of the owner, operator, or permittee to submit a demonstration pursuant to section 9 of this rule.

(e) The detection ground water monitoring program or the assessment ground water monitoring program shall continue throughout the verification resampling program. Progression to an assessment or corrective action ground water monitoring program shall be based on the verification resampling results, regardless of subsequent detection monitoring results if the verification resampling program extends into the next scheduled sampling event.

(f) Following the completion of a verification resampling program, a report must be submitted to the commissioner no later than sixty (60) days following the last verification resampling event or thirty (30) days prior to the next scheduled semiannual sampling event, whichever occurs first. This report must be written and include the following:

(1) All information required under section 1(t) of this rule.

(2) The date the commissioner was notified as required in subsection (d).

(3) Whether the ground water monitoring program will:

(A) remain in detection monitoring or assessment monitoring;

(B) initiate an assessment monitoring program; or

(C) initiate a corrective action program.

(4) Whether the owner, operator, or permittee intends to make a demonstration pursuant to section 9 of this rule.

(5) Results of the verification resampling, including information required by section 1(t)(3) through 1(t)(5) of this rule.

(g) If the verification sampling program determines that a statistically significant increase did occur, the owner, operator, or permittee:

- (1) must initiate an assessment ground water monitoring program that meets the requirements of section 10 of this rule or a corrective action program that meets the requirements of section 13 of this rule, whichever program is applicable; or
- (2) may choose to make a demonstration pursuant to section 9 of this rule, while maintaining a detection monitoring program.

(h) The commissioner may approve an extension of the submittal deadlines required by subsection (f) if the owner, operator, or permittee:

- (1) requests an extension; and
- (2) provides an explanation for the need of an extension.

*(Solid Waste Management Board; 329 IAC 10-21-8; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1869; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2805; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3850)*

SECTION 78. 329 IAC 10-21-9 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-9 Demonstration that a statistically significant increase or contamination is not attributable to a municipal solid waste land disposal facility unit**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
Affected: IC 13-20; IC 36-9-30

Sec. 9. (a) If a **verified** statistically significant increase in a constituent concentration has been determined, the owner, operator, or permittee may demonstrate that the **verified** statistically significant increase was caused by:

- (1) a source other than the MSWLF unit;
- (2) an error in sampling technique, laboratory analysis, or statistical evaluation; or
- (3) natural variation in ground water quality.

(b) If the owner, operator, or permittee intends to make a demonstration under this section, the owner, operator, or permittee shall submit, within fourteen (14) days of verifying a statistically significant increase, a plan that describes:

- (1) the general approach that will demonstrate that the MSWLF unit did not cause the verified statistical increase; and
- (2) a schedule to complete the demonstration. Based on previous ground water data and the thoroughness of the plan submitted under subdivision (1), the commissioner may modify the proposed schedule.

(c) If a demonstration is approved by the commissioner, the owner, operator, or permittee may continue detection ground water monitoring or assessment ground water monitoring, whichever is applicable.

(d) ~~If the owner, operator, or permittee is unable to submit a successful demonstration~~ **a demonstration is not approved based on items listed in (a), or the demonstration is not submitted** within the time frame specified in subsection (b)(2), **then** the owner, operator, or permittee shall initiate either an assessment ground water monitoring program or a corrective action program, whichever program is applicable. **The owner, operator, or permittee may continue the demonstration process while implementing an assessment ground water monitoring program or a corrective action program, whichever is applicable. If, subsequently, the extended demonstra-**

**tion process proves that the MSWLF unit is not the source of the verified statistically significant increase, the MSWLF unit may return to detection monitoring or assessment monitoring provided there have been no other verified statistically significant increases.**

~~(e) If a successful demonstration is not submitted within the time frame identified in subsection (b)(2); the owner, operator, or permittee may extend the demonstration process while implementing an assessment ground water monitoring program or a corrective action program, whichever is applicable. If, subsequently, the extended demonstration process proves successful, the MSWLF unit may return to detection monitoring or assessment monitoring, pursuant to section 7 of this rule; provided there have been no other verified statistically significant increases.~~

~~(f) (e) The detection monitoring program or the assessment monitoring program, whichever is applicable, must be continued throughout the demonstration period identified in subsection (b)(2).~~

~~(g) (f) The commissioner shall consider that a statistically significant increase is attributable to the MSWLF unit if the owner, operator, or permittee chooses not to demonstrate pursuant to this section. (Solid Waste Management Board; 329 IAC 10-21-9; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1870; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2805; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3851)~~

SECTION 79. 329 IAC 10-21-10 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-10 Assessment ground water monitoring program**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
Affected: IC 13-20; IC 36-9-30

Sec. 10. (a) Establishment of an assessment ground water monitoring program is required upon any of the following circumstances:

- (1) When the owner, operator, or permittee has verified that a statistically significant increase over background levels has occurred for any constituent listed in section 15(a) of this rule (Table 1A) at any ground water monitoring well at the monitoring boundary of the MSWLF unit, and a demonstration pursuant to section 9 of this rule has not been approved by the commissioner.
- (2) When the owner, operator, or permittee is engaged in a corrective action program specified under section 13 of this rule.
- (3) When the owner, operator or permittee of an existing MSWLF is conducting, as of the effective date of this article, a Phase II ground water monitoring program as specified under 329 IAC 2-16, which was repealed in 1996.

(b) The owner, operator, or permittee shall conduct an assessment ground water monitoring program in accordance with the following requirements:

- (1) Within ninety (90) days after determining that the owner, operator, or permittee of an MSWLF must conduct assessment ground water monitoring, all **ground water monitoring wells** containing constituents with statistically significant elevated concentrations, and all **ground water monitoring wells within six hundred (600) feet of the well with the statistically significant elevated concentrations and monitoring the same hydrogeologic unit of the well with the elevated concentrations their adjacent wells**, must be sampled and analyzed for all constituents listed in section 16 of this rule (Table 2). If deemed necessary, the commissioner may require samples to be collected and analyzed from additional **monitoring wells**.

(2) Within fourteen (14) days after receiving certified laboratory results from the final sampling conducted under subdivision (1), the owner, operator, or permittee shall submit to the commissioner written notification of the following information for any constituent listed in section 16 of this rule (Table 2) that is detected:

- (A) The identity and recorded concentration of the constituent.
- (B) The identity of each ground water monitoring well where the constituent was detected.

(3) A copy of the notification required under subdivision (2) and a copy of the certified laboratory results must be placed in the operating record within thirty (30) days of receiving the original certified laboratory results.

(4) The owner, operator, or permittee shall collect and analyze a minimum of four (4) independent samples from each ground water monitoring well identified in subdivision (2) in order to establish background ground water quality. Certified laboratory analyses of the independent ground water samples must be submitted to the commissioner no later than thirty (30) days prior to the next scheduled semiannual sampling event.

(5) The owner, operator, or permittee shall establish a ground water protection standard as described in section 11 of this rule for any constituent that has been detected in ground water samples collected under subdivision (1).

(6) The owner, operator, or permittee shall, during subsequent sampling events, collect at least one (1) independent sample from each **ground water monitoring** well designated to be in an assessment monitoring program as identified in subdivision (2)(B). Each independent sample must be analyzed for all constituents detected and identified in subdivision (2)(A).

(c) For sampling events during assessment ground water monitoring, the commissioner may do the following:

(1) Specify an appropriate subset of ground water monitoring wells to sample and analyze for constituents in section 16 of this rule (Table 2).

(2) Specify a constituent or constituents from section 16 of this rule (Table 2) that may be deleted from the constituent monitoring list upon demonstration by the owner, operator, or permittee that the constituent to be deleted is:

- (A) not reasonably expected to be in the solid waste;
- (B) not derived from the solid waste;
- (C) naturally occurring in the soil that underlies the site and would be soluble in ground water at the detected levels, even in the absence of the MSWLF unit; ~~or~~ **and**
- (D) not a constituent of concern based on historical ground water quality.

(3) Specify a constituent or constituents that may be added to the **constituent assessment** monitoring **constituent** list, based on historical, ground water quality, **analysis of leachate derived from the MSWLF**, or wastes placed in the MSWLF unit.

(4) Specify an alternate frequency for repeated sampling and analysis of the ground water for the full set of constituents in section 16 of this rule (Table 2). The sampling frequency for constituents in section 15 (Table 1A and Table 1B) may be altered, provided it is at least an annual frequency. The alternate frequency must continue throughout the active life, closure, and post-closure care periods of the MSWLF. The alternate frequency must be based on consideration of the following factors:

- (A) Sedimentology of the aquifer and unsaturated zone.
- (B) Hydraulic conductivity of the aquifer and unsaturated zone.
- (C) Ground water flow rates.
- (D) Minimum distance between upgradient solid waste boundary

- of the MSWLF unit and downgradient monitoring well screen.
- (E) Resource value of the aquifer.
- (F) The fate of any constituents detected.
- (G) The mode of transport of any detected constituents.
- (H) Ground water quality data.
- (I) Other information as required by the commissioner for the demonstration.

(d) After establishing background ground water quality described in subsection (b)(4), subsequent semiannual sampling events must include the following:

(1) At least one (1) independent sample from all the ground water monitoring wells that are included in both detection and assessment ground water monitoring programs and any other **monitoring** wells specified by the commissioner.

(2) Analysis for all constituents included in both detection and assessment ground water monitoring programs.

**(3) Determination if there is a verified statistically significant increase for all constituents identified in subsection (2). The determination shall be in accordance with section 6 of this rule and subsection (f).**

~~(4)~~ (4) Submittal of the information required in section 1(t) of this rule.

(e) Starting from the date that an assessment ground water monitoring program is required, ground water samples must be collected and analyzed for all constituents in section 16 of this rule (Table 2) on an annual basis, or at an alternate frequency specified by the commissioner. Samples for assessment monitoring must be collected from each **ground water monitoring** well identified in subsection (b)(2)(B). For these sampling events, the owner, operator, or permittee shall:

(1) for this sampling event, submit written notification as described in subsection (b)(2);

(2) establish background ground water quality as described in subsection (b)(4) for any constituent that has been detected in ground water samples collected during this sampling event;

(3) establish a ground water protection standard as described in section 11 of this rule for any constituent that has been detected in ground water samples collected during the sampling event;

(4) for subsequent sampling events following the sampling event required under this section, include sampling for all constituents listed in subdivision (1); and

(5) include the sampling event in the assessment monitoring sample event schedule.

(f) During assessment ground water monitoring, the owner, operator, or permittee shall proceed according to the following:

(1) If the concentration of ~~any~~ a constituent listed in section 16 of this rule (Table 2) is determined to be less than or equal to background ground water quality, for two (2) consecutive semiannual sampling events, then the owner, operator, or permittee may request from the commissioner permission to **remove the constituent from the assessment monitoring list. When the concentrations of all constituents listed in section 16 of this rule (Table 2) is determined to be less than or equal to background ground water quality, for two (2) consecutive semiannual sampling events, then the owner, operator, or permittee may request from the commissioner permission to return to a detection monitoring program.**

(2) If the concentration of any constituent listed in section 16 of this rule (Table 2) is determined to be a statistically significant increase over background ground water quality, but below the ground water protection standard established in section 11 of this rule, then



assessment ground water monitoring must continue in accordance with this section.

(3) If a statistically significant increase above the ground water protection standard is determined for any constituent listed in section 16 of this rule (Table 2), the owner, operator, or permittee shall perform the following:

(A) Notify the commissioner within fourteen (14) days of this determination. The notification to the commissioner must include the following information:

(i) A list of all constituents in section 16 of this rule (Table 2) that have a statistically significant increase above the ground water protection standard established under section 11 of this rule.

(ii) The identification of each ground water monitoring well from which samples indicated a statistically significant increase.

(iii) Whether or not the owner, operator, or permittee intends to institute verification procedures and resampling as described under section 8 of this rule.

(B) In the event that a corrective action program is to be implemented, notify all pertinent local officials, including the county commissioner, and officials of the solid waste management district and the county health department.

(C) Within ninety (90) days of a determination under this subdivision, submit to the commissioner an initial proposal for a corrective action program that is designed to meet the requirements of section 13(b) of this rule unless the owner, operator, or permittee chooses to:

(i) institute a verification resampling program described in section 8 of this rule; or

(ii) submit a demonstration pursuant to section 9 of this rule.

(D) Remain in an assessment ground water monitoring program, which the commissioner may modify.

(g) During assessment ground water monitoring, whenever the concentration of a secondary constituent identified in section 11(c) of this rule is found to exceed levels that are twice the ground water protection standard, as established in section 11 of this rule, the owner, operator, or permittee shall perform the following:

(1) Notify the commissioner within fourteen (14) days of the finding. This notification must include the following information:

(A) The identity and most recent concentration of any secondary constituent found to have the excessive levels.

(B) The identification of each ground water monitoring well found to have excessive levels of a secondary constituent.

(C) Whether verification resampling, as described under section 8 of this rule, will be initiated.

(2) Submit, if so directed by the commissioner, a proposal for a corrective action program. The proposal must be submitted within ninety (90) days after receiving notification from the commissioner that the proposal is required and must be in accordance with the requirements of section 13(b) of this rule, provided the owner, operator, or permittee:

(A) does not institute a verification resampling program pursuant to section 8 of this rule; and

(B) does not choose to submit a demonstration pursuant to section 9 of this rule.

(3) Remain in an assessment ground water monitoring program, which the commissioner may modify.

**(h) If it is determined that the MSWLF is the cause of concentrations exceeding the secondary maximum contaminant levels established for chloride, sulfate, and total dissolved solids at the**

**property boundary of the MSWLF, then the owner, operator, or permittee may be required to establish a corrective action program under section 13 of this rule to ensure the elevated concentrations do not go beyond the property boundary.** (*Solid Waste Management Board; 329 IAC 10-21-10; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1870; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2806; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3852*)

SECTION 80. 329 IAC 10-21-13 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-13 Corrective action program**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 13. (a) The owner, operator, or permittee must submit a proposal for a plume and site characterization plan, as described in subsection (b), and initiate an assessment of various corrective measures, as described in subsection (d), within ninety (90) days of determining any of the following:

(1) A statistically significant increase above any ground water protection standard, as identified in section 11(a) or 11(b) of this rule, has occurred during an assessment ground water monitoring program for any constituent that is listed in section 16 of this rule (Table 2).

(2) At the request of the commissioner, and during assessment monitoring, a secondary constituent listed under section 11(c) of this rule has exceeded levels that are twice the ground water protection standard for that constituent.

(3) At the request of the commissioner, and during detection monitoring, a constituent listed in section 15(a) of this rule (Table 1A) has shown a concentration that is a statistically significant increase over a ground water protection standard established during a previous assessment monitoring program. Previous monitoring programs include those programs conducted under section 10 of this rule, or Phase II programs conducted under 329 IAC 2-16, which was repealed in 1996.

(b) The proposal for a plume and site characterization plan must include the following:

(1) Characterization of the chemical and physical nature of the contaminants, including vertical and horizontal extent of the release by:

(A) proposing location and installation procedures for additional assessment ground water monitoring wells, as necessary; and

(B) identification of all constituents to be analyzed during subsequent ground water sampling events.

(2) Characterization of the contaminated aquifer, limited to the area of the contamination plume. Aquifer characterization may include all of the items described in this subsection.

(3) Proposed location and installation procedures of at least one (1) additional ground water monitoring well at the facility boundary in the direction of contaminant migration.

(4) The process by which all persons who own or reside on land that directly overlies any part of the contaminated ground water plume will be notified.

(5) The process for sampling and analyzing ground water at any private or public intake, as specified by the commissioner, unless permission to sample cannot be obtained from the owner of the intake.

(6) The process by which drinking water will be supplied to all public and private ground water intakes affected by the contamination.

(7) Procedures that will be implemented to stop further migration of contaminants.

(c) Implementation of the plume and site characterization plan must include the following:

- (1) Within thirty (30) days of receiving written approval of the initial corrective action proposal, the owner, operator, or permittee shall implement subsection (b)(1) through (b)(7).
- (2) The owner, operator, or permittee shall submit a corrective action progress report, including any sampling and analysis results, on a semiannual basis, until the contamination has been determined to be cleaned up as defined in subsection (j).
- (3) The ground water monitoring well identified in subsection (b)(3) must be sampled in accordance with section 10(b) and 10(d) of this rule.
- (4) If any additional constituent is detected in the **ground water** monitoring well identified in subsection (b)(3) and that constituent exceeds its ground water protection standard at a statistically significant concentration, then the owner, operator, or permittee shall include that constituent in the sampling of the ground water monitoring wells identified in subsection (b)(1).
- (5) The owner, operator, or permittee shall gather sufficient information from the plume and site characterization plan to be presented at the public meeting required in section 12 of this rule and incorporated in the final decision on an corrective action remedy as described in subsection (e).

(d) The assessment of various corrective measures must be initiated within ninety (90) days of determining that a corrective action program is necessary. The owner, operator, or permittee shall complete the assessment of various corrective measures in a reasonable time, with the approval of the commissioner, and in accordance with the following:

- (1) The assessment of various corrective measures must include an analysis of the effectiveness of potential corrective measures in meeting all of the remedy requirements and objectives as described in subsection (e).
- (2) The analysis must include the following:
  - (A) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies. This shall include safety impacts, cross-media impacts, and control of exposure to any residual contamination.
  - (B) The time required to begin and complete the remedy.
  - (C) Implementation costs of the proposed remedy.
  - (D) The institutional requirements, such as state or local permit requirements, or other environmental or public health requirements that may substantially affect remedy implementation.
  - (E) A discussion by the owner, operator, or permittee of the corrective measures assessment, prior to the selection of a remedy, in a public meeting as required in section 12 of this rule.
- (3) The owner, operator, or permittee shall continue to monitor in accordance with the assessment ground water monitoring program as required in section 10 of this rule.

(e) The selection of the corrective action remedy must be based on the assessment of various corrective measures conducted under subsection (d), including the following:

- (1) The owner, operator, or permittee shall:
  - (A) select a remedy that, at a minimum, meets the standards listed in subdivision (2); and
  - (B) submit to the commissioner, within sixty (60) days after the public meeting required in section 12 of this rule, a report describing the selected remedy and how the remedy meets the standards of subdivision (2).
- (2) The owner, operator, or permittee shall select a remedy that:
  - (A) will be protective of human health and the environment;

(B) will attain the ground water protection standard as required in section 11 of this rule;

(C) will reduce or eliminate, to the maximum extent practicable, further releases of those constituents in sections 15 and 16 of this rule (Table 1A, Table 1B, and Table 2), and in section 11(c) of this rule that may pose a threat to human health or the environment;

(D) will comply with standards for waste management as required in subsection (i); and

(E) is chosen after considering input from the public hearing required under section 12 of this rule.

(3) In selecting a remedy that meets the standards of subdivision (2), a report must be submitted that includes the following factors:

(A) The long and short term effectiveness and protection that is offered by the potential remedy, along with an assessment of the remedy's probable outcome, based on the following considerations:

- (i) The magnitude of reduction in the existing risks.
- (ii) The magnitude of residual risks in terms of likelihood of further releases, due to waste remaining after implementing a remedy.
- (iii) The type and degree of long term management required, including monitoring, operation, and maintenance.
- (iv) The short term risks that might be posed to the community, workers, or the environment during the implementation of such a remedy. Short term risk assessment shall include potential threats to human health and the environment associated with excavation, transportation, redispersion, or containment of waste or contaminated materials.
- (v) The estimated time until corrective measures are completed.
- (vi) The potential for exposure of humans and environmental receptors to remaining waste, including the potential threat associated with excavation, transportation, redispersion, or containment of waste or contaminated materials.
- (vii) The long term reliability of the engineering and institutional controls.
- (viii) The potential need for additional or alternative remedies.

(B) The effectiveness of the remedy in controlling the source and in reducing further releases based on the following considerations:

- (i) The extent to which containment practices will reduce further releases.
- (ii) The extent to which treatment technologies may be used to reduce further releases.

(C) The ease or difficulty of implementing a potential remedy based on the following considerations:

- (i) The technical difficulty of constructing the proposed remedy.
- (ii) The expected operational reliability of the proposed remedial technologies.
- (iii) The need to coordinate with and obtain necessary approvals and permits from other local or state agencies.
- (iv) The availability of necessary equipment and specialists.
- (v) The available capacity and location of needed treatment, storage, and disposal facilities.

(D) The capability of the owner, operator, or permittee to manage the technical and economic aspects of the corrective measures.

(E) The degree to which community concerns are addressed by a potential remedy.

(4) The selected remedy report, as described in subdivision (1)(B), must include a schedule for initiating and completing remedial activities. This schedule must be based on the following considerations:

(A) Vertical and horizontal extent, and physical or chemical characteristics of contamination.

- (B) Direction of contaminant movement.
  - (C) Capacity of remedial technologies to achieve compliance with ground water protection standards, as established under section 11 of this rule, and any other remedial objectives.
  - (D) Availability of treatment or disposal capacity for waste volumes managed during implementation of remedial measures.
  - (E) Practical considerations of proposing to use currently unavailable technology that may offer significant advantages over readily available technology, in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives.
  - (F) Potential risks to human health and the environment from exposure to contamination prior to completing remedial measures.
  - (G) Resource value of the zone of saturation or aquifer, including the following:
    - (i) Current and future uses.
    - (ii) Proximity and withdrawal rate of users.
    - (iii) Ground water quantity and quality.
    - (iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
    - (v) The hydrogeologic characteristics of the MSWLF and surrounding land.
    - (vi) Ground water removal and treatment costs.
    - (vii) The cost and availability of alternative water supplies.
  - (H) Practical capability of the owner, operator, or permittee to achieve the remedy.
  - (I) Other relevant factors that may be determined by the commissioner.
- (5) Selection of a remedy and implementation schedule must be submitted to the commissioner for review and approval.
- (6) The commissioner may determine that remediation of a released constituent, listed in either section 16 of this rule (Table 2) or in section 11(c) of this rule, is not necessary if either of the following are demonstrated to the satisfaction of the commissioner:
- (A) Remediation is technically impracticable.
  - (B) Remediation would result in unacceptable cross-media impacts.
- (7) If the commissioner determines that an aquifer cannot be remediated, the owner, operator, or permittee shall contain the aquifer to prevent the migration of contaminants.
- (8) A determination made by the commissioner under subdivision (6) will not affect the authority of the state to require source control measures or other necessary measures to:
- (A) eliminate or minimize further releases to the ground water;
  - (B) prevent exposure to the ground water; or
  - (C) remediate ground water quality to technically achievable concentrations and significantly reduce threats to human health or the environment.
- (f) Based on the schedule established under subsection (e)(4) and approved by the commissioner under subsection (e)(5), the owner, operator, or permittee shall do the following:
- (1) Establish and implement a corrective action ground water monitoring program that:
    - (A) at a minimum, meets the requirements of an assessment monitoring program under section 10 of this rule;
    - (B) indicates the effectiveness of the corrective action remedy; and
    - (C) demonstrates compliance with the ground water protection standard under subsection (j).
  - (2) Implement the corrective action remedy selected under subsection (e).
  - (3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures must, to the greatest extent practicable, be consistent with remedial objectives

and, if possible, contribute to the performance of remedial measures. The following factors must be considered in determining whether interim measures are necessary:

- (A) Time required to develop and implement a final remedy.
  - (B) Actual and potential exposure of nearby populations or environmental receptors to regulated constituents.
  - (C) Actual and potential contamination of potentially useable water supplies or sensitive ecosystems.
  - (D) Further degradation of the ground water that may occur if remedial action is not initiated expeditiously.
  - (E) Weather conditions that may cause regulated constituents to migrate or be released.
  - (F) Potential for:
    - (i) fire or explosion; or
    - (ii) exposure to regulated constituents as a result of an accident, a container failure, or a handling system failure.
  - (G) Other situations that may pose threats to human health and the environment.
- (4) Submit a report to the commissioner detailing the progress and performance of the selected remedy. The report must be submitted on a semiannual basis or as determined by the commissioner.
- (g) An owner, operator, or permittee or the commissioner may determine, based on information developed after implementation of the remedy has begun or on other information, that compliance under subsection (e)(2) is not being achieved through the remedy selected. In such cases, after approval by the commissioner, the owner, operator, or permittee shall implement other methods or techniques that could practicably achieve compliance with the requirements unless the owner, operator, or permittee makes a determination under subsection (h).
- (h) If the owner, operator, or permittee determines that compliance with requirements under subsection (e)(2) cannot be technically achieved with any currently available methods, the owner, operator, or permittee shall:
- (1) apply for a commissioner's certification that compliance with requirements under subsection (e)(2) cannot be achieved with any currently available methods;
  - (2) implement alternate measures to contain contamination, as necessary, to protect human health, the environment and water resources;
  - (3) implement alternate measures that are technically practicable and consistent with the overall remedial objective to:
    - (A) control contamination sources; and
    - (B) remove or decontaminate equipment, units, devices, or structure; and
  - (4) within fourteen (14) days of determining that compliance cannot be achieved under subsection (g), submit a report to the commissioner that justifies the alternative measures. The report must be approved by the commissioner prior to implementation of any alternative measures.
- (i) During a corrective action program, all solid waste managed under a remedy that is required under subsection (e), or under an interim measure that is required under subsection (f)(3), must be managed in a manner that:
- (1) is protective of human health and the environment; and
  - (2) complies with the applicable requirements of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 et seq., as amended by the Hazardous and Solid Waste Amendments of 1984.
- (j) Remedies selected under subsection (e) are considered complete

when the owner, operator, or permittee has demonstrated to the satisfaction of the commissioner the following:

- (1) Ground water protection standards have been met at all points within the plume of contamination.
- (2) For a period of three (3) consecutive years, using statistical procedures and performance standards outlined in section 6 of this rule, the following ground water protection standard, whichever is applicable, has not been exceeded:
  - (A) The ground water protection standards for the constituents listed in section 16 of this rule (Table 2).
  - (B) Levels that are twice the concentration of any secondary constituent identified in section 11(c) of this rule.
- (3) All corrective actions required to complete the remedy have been satisfied.

(k) The commissioner may, after considering the factors indicated in subsection (l), specify an alternate period during which the following demonstration, whichever is applicable, must be made:

- (1) The concentrations of the constituents listed in section 16 of this rule (Table 2) have not exceeded ground water protection standards.
- (2) The concentrations of constituents listed in section 11(c) of this rule have not exceeded levels that are twice the ground water protection standard.

(l) The following factors will be considered by the commissioner in specifying an alternative time period:

- (1) Vertical and horizontal extent and concentration of the release.
- (2) Physical and chemical characteristics of the regulated constituents within the ground water.
- (3) Accuracy of the ground water monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy.
- (4) Physical and chemical characteristics of the affected ground water.
- (5) Physical and chemical characteristics of the affected or potentially affected aquifer system.

(m) Within fourteen (14) days after the completion of all remedial measures, a certification report, signed by the owner, operator, or permittee and a qualified ground water scientist, shall be submitted to the commissioner for written approval. The report must certify that the remedy has been completed in compliance with the requirements of subsection (j).

(n) Upon receipt of the commissioner's written approval of the certification report specified in subsection (m), the owner, operator, or permittee shall be released from the requirements for financial assurance for corrective action specified in 329 IAC 10-39-10.

(o) Corrective action programs that have been initiated under 329 IAC 1.5, which was repealed in 1989, or under 329 IAC 2, which was repealed in 1996, must continue as approved by the commissioner, and the commissioner may incorporate requirements under this rule. (*Solid Waste Management Board; 329 IAC 10-21-13; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1874; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2808; errata filed Jun 10, 1998, 9:23 a.m.: 21 IR 3939; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3855*)

SECTION 81. 329 IAC 10-21-15 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-15 Constituents for detection monitoring**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-20; IC 36-9-30

Sec. 15. (a) The following constituents shall be measured during detection monitoring and be subject to statistical evaluation procedures under section 6 of this rule:

TABLE 1A  
 Constituents for Detection Monitoring Subject to  
 Statistical Evaluation Procedures

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Ammonia (as N)	.....
(2) Benzene	71-43-2
(3) Cadmium	(Dissolved)
(4) Carbon tetrachloride	56-23-5
(5) Chloride	.....
(6) Chlorobenzene	108-90-7
(7) Chloroethane; Ethyl chloride	75-00-3
(8) Chloroform; Trichloromethane	67-66-3
(9) Chromium	(Dissolved)
(10) Copper	(Dissolved)
(11) o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
(12) p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
(13) 1,1-Dichloroethane; Ethylidene chloride	75-34-3
(14) 1,2-Dichloroethane; Ethylene dichloride	107-06-2
(15) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4
(16) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2
(17) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5
(18) 1,2-Dichloropropane; Propylene dichloride	78-87-5
(19) cis-1,3-Dichloropropene	10061-01-5
(20) trans-1,3-Dichloropropene	10061-02-6
(21) Ethylbenzene	100-41-4
(22) Methyl bromide; Bromomethane	74-83-9
(23) Methyl chloride; Chloromethane	74-87-3
(24) Methylene chloride; Dichloromethane	75-09-2
(25) Styrene	100-42-5
(26) Sodium	(Dissolved)
(27) Sulfate	.....
(28) 1,1,1,2-Tetrachloroethane	630-20-6
(29) 1,1,2,2-Tetrachloroethane	79-34-5
(30) Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4
(31) Toluene	108-88-3
(32) 1,1,1-Trichloroethane; Methylchloroform	71-55-6
(33) 1,1,2-Trichloroethane	79-00-5
(34) Trichloroethylene; Trichloroethene	79-01-6
(35) Trichlorofluoromethane; CFC-11	75-69-4
(36) Vinyl chloride; Chloroethene	75-01-4
(37) Xylene (Total)	See note 3
(38) Zinc	(Dissolved)

**Inorganics:**

- (1) Ammonia (as N) .....
- (2) Arsenic .....
- (3) Cadmium .....
- (4) Chloride .....
- (5) Chromium .....
- (6) Copper .....
- (7) Sodium .....
- (8) Sulfate .....

**Volatile organic compounds:**

- (9) Benzene .....
- (10) Carbon tetrachloride .....
- (11) Chlorobenzene .....
- (12) Chloroethane; Ethyl chloride .....

- (13) Chloroform; Trichloromethane . . . . . 67-66-3
- (14) o-Dichlorobenzene; 1,2-Dichlorobenzene . . . . . 95-50-1
- (15) p-Dichlorobenzene; 1,4-Dichlorobenzene . . . . . 106-46-7
- (16) 1,1-Dichloroethane; Ethylidene chloride . . . . . 75-34-3
- (17) 1,2-Dichloroethane; Ethylene dichloride . . . . . 107-06-2
- (18) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride . . . . . 75-35-4
- (19) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene 156-59-2
- (20) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene . . . . . 156-60-5
- (21) 1,2-Dichloropropane; Propylene dichloride . . . . . 78-87-5
- (22) cis-1,3-Dichloropropene . . . . . 10061-01-5
- (23) trans-1,3-Dichloropropene . . . . . 10061-02-6
- (24) Ethylbenzene . . . . . 100-41-4
- (25) Methyl bromide; Bromomethane . . . . . 74-83-9
- (26) Methyl chloride; Chloromethane . . . . . 74-87-3
- (27) Methylene chloride; Dichloromethane . . . . . 75-09-2
- (28) Styrene . . . . . 100-42-5
- (29) 1,1,1,2-Tetrachloroethane . . . . . 630-20-6
- (30) 1,1,2,2-Tetrachloroethane . . . . . 79-34-5
- (31) Tetrachloroethylene; Tetrachloroethene; Perchloroethylene . . . . . 127-18-4
- (32) Toluene . . . . . 108-88-3
- (33) 1,1,1-Trichloroethane; Methylchloroform . . . . . 71-55-6
- (34) 1,1,2-Trichloroethane . . . . . 79-00-5
- (35) Trichloroethylene; Trichloroethene . . . . . 79-01-6
- (36) Trichlorofluoromethane; CFC-11 . . . . . 75-69-4
- (37) Vinyl chloride; Chloroethene . . . . . 75-01-4
- (38) Xylene (Total) . . . . . See note 3

(b) The following constituents shall be measured during detection monitoring but are exempt from statistical evaluation procedures under section 6 of this rule:

TABLE 1B  
Constituents for Detection Monitoring Not Subject to Statistical Evaluation Procedures

- (1) Field pH . . . . .
- (2) Field specific conductance . . . . .
- (3) Field Eh (Oxidation-Reduction Potential) . . . . .
- (4) Field dissolved oxygen . . . . .
- (5) Total solids . . . . .
- (6) Total dissolved solids . . . . .
- (7) Alkalinity . . . . .
- (8) Bicarbonate . . . . .
- (9) Calcium . . . . . (Dissolved)
- (10) Carbonate . . . . .
- (11) Iron . . . . . (Dissolved)
- (12) Magnesium . . . . . (Dissolved)
- (13) Manganese . . . . . (Dissolved)
- (14) Potassium . . . . . (Dissolved)

Notes:

<sup>1</sup>Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

<sup>2</sup>Chemical Abstracts Service registry number. Where "(Dissolved)" is entered, all species in a filtered sample of the ground water that contain this element are included.

<sup>3</sup>Xylene (total). This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1130-20-7).

(Solid Waste Management Board; 329 IAC 10-21-15; filed Mar 14,

1996, 5:00 p.m.: 19 IR 1879; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2812)

SECTION 82. 329 IAC 10-21-16 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-21-16 Constituents for assessment monitoring**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 16. (a) The following constituents in this section shall be subject to assessment monitoring procedures under section 10 of this rule.

TABLE 2  
Constituents for Assessment Monitoring

<u>Common Name<sup>1</sup></u>	<u>CAS RN<sup>2</sup></u>
Acenaphthylene . . . . .	208-96-8
Acenaphthene . . . . .	83-32-9
Acetone . . . . .	67-64-1
Acetonitrile; Methyl cyanide . . . . .	75-05-8
Acetophenone . . . . .	98-86-2
2-Acetylaminofluorene; 2-AAF . . . . .	53-96-3
Acrolein . . . . .	107-02-8
Acrylonitrile . . . . .	107-13-1
Aldrin . . . . .	309-00-2
Allyl chloride . . . . .	107-05-1
4-Aminobiphenyl . . . . .	92-67-1
Anthracene . . . . .	120-12-7
Antimony . . . . . (Total)	
Antimony . . . . . (Dissolved)	
Arsenic . . . . . (Total)	
Arsenic . . . . . (Dissolved)	
Barium . . . . . (Total)	
Barium . . . . . (Dissolved)	
Benzene . . . . .	71-43-2
Benzo[a]anthracene; Benzanthracene . . . . .	56-55-3
Benzo[b]fluoranthene . . . . .	205-99-2
Benzo[k]fluoranthene . . . . .	207-08-9
Benzo[ghi]perylene . . . . .	191-24-2
Benzo[a]pyrene . . . . .	50-32-8
Benzyl alcohol . . . . .	100-51-6
Beryllium . . . . . (Total)	
Beryllium . . . . . (Dissolved)	
alpha-BHC . . . . .	319-84-6
beta-BHC . . . . .	319-85-7
delta-BHC . . . . .	319-86-8
gamma-BHC; Lindane . . . . .	58-89-9
Bis(2-chloroethoxy) methane . . . . .	111-91-1
Bis(2-chloroethyl) ether; Dichloroethyl ether . . . . .	111-44-4
Bis(2-chloro-1-methylethyl) ether; 2,2-Dichlorodiisopropyl ether; DCIP (See note 3) . . . . .	108-60-1
Bis(2-ethylhexyl) phthalate . . . . .	117-81-7
Bromochloromethane; Chlorobromomethane . . . . .	74-97-5
Bromodichloromethane; Dichlorobromomethane . . . . .	75-27-4
Bromoform; Tribromomethane . . . . .	75-25-2
4-Bromophenyl phenyl ether . . . . .	101-55-3
Butyl benzyl phthalate; Benzyl butyl phthalate . . . . .	85-68-7
Cadmium . . . . . (Total)	
Cadmium . . . . . (Dissolved)	
Carbon disulfide . . . . .	75-15-0
Carbon tetrachloride . . . . .	56-23-5
Chlordane . . . . .	See note 4

p-Chloroaniline	106-47-8	4,6-Dinitro-o-cresol; 4,6-Dinitro-2-methylphenol	534-52-1
Chlorobenzene	108-90-7	2,4-Dinitrophenol	51-28-5
Chlorobenzilate	510-15-6	2,4-Dinitrotoluene	121-14-2
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	59-50-7	2,6-Dinitrotoluene	606-20-2
Chloroethane; Ethyl chloride	75-00-3	Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7
Chloroform; Trichloromethane	67-66-3	Di-n-octyl phthalate	117-84-0
2-Chloronaphthalene	91-58-7	Diphenylamine	122-39-4
2-Chlorophenol	95-57-8	Disulfoton	298-04-4
4-Chlorophenyl phenyl ether	7005-72-3	Endosulfan I	959-98-8
Chloroprene	126-99-8	Endosulfan H	33213-65-9
Chromium	(Total)	Endosulfan sulfate	1031-07-8
Chromium	(Dissolved)	Endrin	72-20-8
Chrysene	218-01-9	Endrin aldehyde	7421-93-4
Cobalt	(Total)	Ethylbenzene	100-41-4
Cobalt	(Dissolved)	Ethyl methacrylate	97-63-2
Copper	(Total)	Ethyl methanesulfonate	62-50-0
Copper	(Dissolved)	Famphur	52-85-7
m-Cresol; 3-Methylphenol	108-39-4	Fluoranthene	206-44-0
o-Cresol; 2-Methylphenol	95-48-7	Fluorene	86-73-7
p-Cresol; 4-Methylphenol	106-44-5	Fluoride	
Cyanide	57-12-5	Heptachlor	76-44-8
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Heptachlor epoxide	1024-57-3
4,4'-DDD	72-54-8	Hexachlorobenzene	118-74-1
4,4'-DDE	72-55-9	Hexachlorobutadiene	87-68-3
4,4'-DDT	50-29-3	Hexachlorocyclopentadiene	77-47-4
Diallate	2303-16-4	Hexachloroethane	67-72-1
Dibenz[a,h]anthracene	53-70-3	Hexachloropropene	1888-71-7
Dibenzofuran	132-64-9	2-Hexanone; methyl butyl ketone	591-78-6
Dibromochloromethane; Chlorodibromomethane	124-48-1	Indeno(1,2,3-cd)pyrene	193-39-5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Isobutyl alcohol	78-83-1
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	Isodrin	465-73-6
Di-n-butyl phthalate	84-74-2	Isophorone	78-59-1
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	Isosafrole	120-58-1
m-Dichlorobenzene; 1,3-Dichlorobenzene	541-73-1	Kepone	143-50-0
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	Lead	(Total)
3,3'-Dichlorobenzidine	91-94-1	Lead	(Dissolved)
trans-1,4-Dichloro-2-butene	110-57-6	Lithium	(Total)
Dichlorodifluoromethane; CFC 12	75-71-8	Lithium	(Dissolved)
1,1-Dichloroethane; Ethylidene chloride	75-34-3	Mercury	(Total)
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Mercury	(Dissolved)
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride		Methacrylonitrile	126-98-7
	75-35-4	Methapyriene	91-80-5
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	Methoxychlor	72-43-5
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	Methyl bromide; Bromomethane	74-83-9
2,4-Dichlorophenol	120-83-2	Methyl chloride; Chloromethane	74-87-3
2,6-Dichlorophenol	87-65-0	3-Methylcholanthrene	56-49-5
1,2-Dichloropropane; Propylene dichloride	78-87-5	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
1,3-Dichloropropane; Trimethylene dichloride	142-28-9	Methyl iodide; Iodomethane	74-88-4
2,2-Dichloropropane; Isopropylidene chloride	594-20-7	Methyl methacrylate	80-62-6
1,1-Dichloropropene	563-58-6	Methyl methanesulfonate	66-27-3
cis-1,3-Dichloropropene	10061-01-5	2-Methylnaphthalene	91-57-6
trans-1,3-Dichloropropene	10061-02-6	Methyl parathion; Parathion methyl	298-00-0
Dieldrin	60-57-1	4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1
Diethyl phthalate	84-66-2	Methylene bromide; Dibromomethane	74-95-3
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Methylene chloride; Dichloromethane	75-09-2
Dimethoate	60-51-5	Naphthalene	91-20-3
p-(Dimethylamino)azobenzene	60-11-7	1,4-Naphthoquinone	130-15-4
7,12-Dimethylbenz[a]anthracene	57-97-6	1-Naphthylamine	134-32-7
3,3'-Dimethylbenzidine	119-93-7	2-Naphthylamine	91-59-8
2,4-Dimethylphenol; m-Xylenol	105-67-9	Nickel	(Total)
Dimethyl phthalate	131-11-3	Nickel	(Dissolved)
m-Dinitrobenzene	99-65-0	Nitrate (as N)	

o-Nitroaniline; 2-Nitroaniline	88-74-4
m-Nitroaniline; 3-Nitroaniline	99-09-2
p-Nitroaniline; 4-Nitroaniline	100-01-6
Nitrobenzene	98-95-3
o-Nitrophenol; 2-Nitrophenol	88-75-5
p-Nitrophenol; 4-Nitrophenol	100-02-7
N-Nitroso-di-n-butylamine	924-16-3
N-Nitrosodiethylamine	55-18-5
N-Nitrosodimethylamine	62-75-9
N-Nitrosodiphenylamine	86-30-6
N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine	621-64-7
N-Nitrosomethylethylamine	10595-95-6
N-Nitrosopiperidine	100-75-4
N-Nitrosopyrrolidine	930-55-2
5-Nitro-o-toluidine	99-55-8
Parathion	56-38-2
Pentachlorobenzene	608-93-5
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Phenacetin	62-44-2
Phenanthrene	85-01-8
Phenol	108-95-2
p-Phenylenediamine	106-50-3
Phorate	298-02-2
Polychlorinated biphenyls; PCBs; Aroclors	See note 5
Pronamide	23950-58-5
Propionitrile; Ethyl cyanide	107-12-0
Pyrene	129-00-0
Safrole	94-59-7
Selenium	(Total)
Selenium	(Dissolved)
Silver	(Total)
Silver	(Dissolved)
Silvex; 2,4,5-TP	93-72-1
Styrene	100-42-5
Sulfide	18496-25-8
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5
1,2,4,5-Tetrachlorobenzene	95-94-3
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4
2,3,4,6-Tetrachlorophenol	58-90-2
Thallium	(Total)
Thallium	(Dissolved)
Tin	(Total)
Tin	(Dissolved)
Toluene	108-88-3
o-Toluidine	95-53-4
Toxaphene	See note 6
1,2,4-Trichlorobenzene	120-82-1
1,1,1-Trichloroethane; Methylchloroform	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene; Trichloroethene	79-01-6
Trichlorofluoromethane; CFC-11	75-69-4
2,4,5-Trichlorophenol	95-95-4
2,4,6-Trichlorophenol	88-06-2
1,2,3-Trichloropropane	96-18-4
0,0,0-Trichthyl phosphorothioate	126-68-1
sym-Trinitrobenzene	99-35-4
Vanadium	(Total)
Vanadium	(Dissolved)

Vinyl acetate	108-05-4
Vinyl chloride; Chloroethene	75-01-4
Xylene (Total)	See note 7
Zinc	(Total)
Zinc	(Dissolved)

(b) The following metals (dissolved and total):

TABLE 2

Constituents for Assessment Monitoring

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Antimony	(Total)
(2) Antimony	(Dissolved)
(3) Arsenic	(Total)
(4) Arsenic	(Dissolved)
(5) Barium	(Total)
(6) Barium	(Dissolved)
(7) Beryllium	(Total)
(8) Beryllium	(Dissolved)
(9) Cadmium	(Total)
(10) Cadmium	(Dissolved)
(11) Chromium	(Total)
(12) Chromium	(Dissolved)
(13) Cobalt	(Total)
(14) Cobalt	(Dissolved)
(15) Copper	(Total)
(16) Copper	(Dissolved)
(17) Lead	(Total)
(18) Lead	(Dissolved)
(19) Lithium	(Total)
(20) Lithium	(Dissolved)
(21) Mercury	(Total)
(22) Mercury	(Dissolved)
(23) Nickel	(Total)
(24) Nickel	(Dissolved)
(25) Selenium	(Total)
(26) Selenium	(Dissolved)
(27) Silver	(Total)
(28) Silver	(Dissolved)
(29) Thallium	(Total)
(30) Thallium	(Dissolved)
(31) Tin	(Total)
(32) Tin	(Dissolved)
(33) Vanadium	(Total)
(34) Vanadium	(Dissolved)
(35) Zinc	(Total)
(36) Zinc	(Dissolved)

(c) The following inorganics:

TABLE 2

Constituents for Assessment Monitoring

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Cyanide	57-12-5
(2) Fluoride	
(3) Nitrate (as N)	
(4) Sulfide	18496-25-8

(d) The following volatile organic compounds:

TABLE 2

Constituents for Assessment Monitoring

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Acetone	67-64-1
(2) Acetonitrile; Methyl cyanide	75-05-8
(3) Acrolein	107-02-8

(4) Acrylonitrile ..... 107-13-1  
 (5) Allyl chloride ..... 107-05-1  
 (6) Benzene ..... 71-43-2  
 (7) Bromochloromethane; Chlorobromomethane .... 74-97-5  
 (8) Bromodichloromethane; Dichlorobromomethane .... 75-27-4  
 (9) Bromoform; Tribromomethane ..... 75-25-2  
 (10) Carbon disulfide ..... 75-15-0  
 (11) Carbon tetrachloride ..... 56-23-5  
 (12) Chlorobenzene ..... 108-90-7  
 (13) Chloroethane; Ethyl chloride ..... 75-00-3  
 (14) Chloroform; Trichloromethane ..... 67-66-3  
 (15) Chloroprene ..... 126-99-8  
 (16) Dibromochloromethane; Chlorodibromomethane .. 124-48-1  
 (17) 1,2-Dibromo-3-chloropropane; DBCP ..... 96-12-8  
 (18) 1,2-Dibromoethane; Ethylene dibromide; EDB . 106-93-4  
 (19) o-Dichlorobenzene; 1,2-Dichlorobenzene ..... 95-50-1  
 (20) m-Dichlorobenzene; 1,3-Dichlorobenzene ..... 541-73-1  
 (21) p-Dichlorobenzene; 1,4-Dichlorobenzene ..... 106-46-7  
 (22) trans-1,4-Dichloro-2-butene ..... 110-57-6  
 (23) Dichlorodifluoromethane; CFC 12 ..... 75-71-8  
 (24) 1,1-Dichloroethane; Ethylidene chloride ..... 75-34-3  
 (25) 1,2-Dichloroethane; Ethylene dichloride ..... 107-06-2  
 (26) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride ..... 75-35-4  
 (27) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene ... 156-59-2  
 (28) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene ... 156-60-5  
 (29) 1,2-Dichloropropane; Propylene dichloride ..... 78-87-5  
 (30) 1,3-Dichloropropane; Trimethylene dichloride .... 142-28-9  
 (31) 2,2-Dichloropropane; Isopropylidene chloride .. 594-20-7  
 (32) 1,1-Dichloropropene ..... 563-58-6  
 (33) cis-1,3-Dichloropropene ..... 10061-01-5  
 (34) trans-1,3-Dichloropropene ..... 10061-02-6  
 (35) Ethylbenzene ..... 100-41-4  
 (36) 2-Hexanone; methyl butyl ketone ..... 591-78-6  
 (37) Isobutyl alcohol ..... 78-83-1  
 (38) Methacrylonitrile ..... 126-98-7  
 (39) Methyl bromide; Bromomethane ..... 74-83-9  
 (40) Methyl chloride; Chloromethane ..... 74-87-3  
 (41) Methyl ethyl ketone; MEK; 2-Butanone ..... 78-93-3  
 (42) Methyl iodide; Iodomethane ..... 74-88-4  
 (43) Methyl methacrylate ..... 80-62-6  
 (44) Methyl parathion; Parathion methyl ..... 298-00-0  
 (45) 4-Methyl-2-pentanone; Methyl isobutyl ketone .... 108-10-1  
 (46) Methylene bromide; Dibromomethane ..... 74-95-3  
 (47) Methylene chloride; Dichloromethane ..... 75-09-2  
 (48) Styrene ..... 100-42-5  
 (49) 1,1,1,2-Tetrachloroethane ..... 630-20-6  
 (50) 1,1,2,2-Tetrachloroethane ..... 79-34-5  
 (51) Tetrachloroethylene; Tetrachloroethene; Perchloroethylene ..... 127-18-4  
 (52) Toluene ..... 108-88-3  
 (53) 1,1,1-Trichloroethane; Methylchloroform ..... 71-55-6  
 (54) 1,1,2-Trichloroethane ..... 79-00-5  
 (55) Trichloroethylene; Trichloroethene ..... 79-01-6  
 (56) Trichlorofluoromethane; CFC-11 ..... 75-69-4  
 (57) 1,2,3-Trichloropropane ..... 96-18-4  
 (58) Vinyl acetate ..... 108-05-4  
 (59) Vinyl chloride; Chloroethene ..... 75-01-4  
 (60) Xylene (Total) ..... See note 3

(e) The following semi-volatile organic compounds:

TABLE 2  
 Constituents for Assessment Monitoring

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Acenaphthylene	208-96-8
(2) Acenaphthene	83-32-9
(3) Acetophenone	98-86-2
(4) 2-Acetylaminofluorene; 2-AAF	53-96-3
(5) 4-Aminobiphenyl	92-67-1
(6) Anthracene	120-12-7
(7) Benzo[a]anthracene;Benzanthracene	56-55-3
(8) Benzo[b]fluoranthene	205-99-2
(9) Benzo[k]fluoranthene	207-08-9
(10) Benzo[ghi]perylene	191-24-2
(11) Benzo[a]pyrene	50-32-8
(12) Benzyl alcohol	100-51-6
(13) Bis(2-chloroethoxy) methane	111-91-1
(14) Bis(2-chloroethyl) ether; Dichloroethyl ether ...	111-44-4
(15) Bis(2-chloro-1-methylethyl) ether; 2,2-Dichlorodiisopropyl ether; DCIP (See note 4)	108-60-1
(16) Bis(2-ethylhexyl) phthalate	117-81-7
(17) 4-Bromophenyl phenyl ether	101-55-3
(18) Butyl benzyl phthalate; Benzyl butyl phthalate ....	85-68-7
(19) p-Chloroaniline	106-47-8
(20) Chlorobenzilate	510-15-6
(21) p-Chloro-m-cresol; 4-Chloro-3-methylphenol ...	59-50-7
(22) 2-Chloronaphthalene	91-58-7
(23) 2-Chlorophenol	95-57-8
(24) 4-Chlorophenyl phenyl ether	7005-72-3
(25) Chrysene	218-01-9
(26) m-Cresol; 3-Methylphenol	108-39-4
(27) o-Cresol; 2-Methylphenol	95-48-7
(28) p-Cresol; 4-Methylphenol	106-44-5
(29) Diallate	2303-16-4
(30) Dibenz[a,h]anthracene	53-70-3
(31) Dibenzofuran	132-64-9
(32) Di-n-butyl phthalate	84-74-2
(33) 3,3'-Dichlorobenzidine	91-94-1
(34) 2,4-Dichlorophenol	120-83-2
(35) 2,6-Dichlorophenol	87-65-0
(36) Diethyl phthalate	84-66-2
(37) p-(Dimethylamino)azobenzene	60-11-7
(38) 7,12-Dimethylbenz[a]anthracene	57-97-6
(39) 3,3'-Dimethylbenzidine	119-93-7
(40) 2,4-Dimethylphenol; m-Xylenol	105-67-9
(41) Dimethyl phthalate	131-11-3
(42) m-Dinitrobenzene	99-65-0
(43) 4,6-Dinitro-o-cresol; 4,6-Dinitro-2-methylphenol ..	534-52-1
(44) 2,4-Dinitrophenol	51-28-5
(45) 2,4-Dinitrotoluene	121-14-2
(46) 2,6-Dinitrotoluene	606-20-2
(47) Di-n-octyl phthalate	117-84-0
(48) Diphenylamine	122-39-4
(49) Ethyl methacrylate	97-63-2
(50) Famphur	52-85-7
(51) Fluoranthene	206-44-0
(52) Fluorene	86-73-7
(53) Hexachlorobenzene	118-74-1
(54) Hexachlorobutadiene	87-68-3
(55) Hexachlorocyclopentadiene	77-47-4
(56) Hexachloroethane	67-72-1
(57) Hexachloropropene	1888-71-7
(58) Indeno(1,2,3-cd)pyrene	193-39-5



(59) Isodrin ..... 465-73-6  
 (60) Isophorone ..... 78-59-1  
 (61) Isosafrole ..... 120-58-1  
 (62) Kepone ..... 143-50-0  
 (63) Methapyrilene ..... 91-80-5  
 (64) 3-Methylcholanthrene ..... 56-49-5  
 (65) Methyl methanesulfonate ..... 66-27-3  
 (66) 2-Methylnaphthalene ..... 91-57-6  
 (67) Naphthalene ..... 91-20-3  
 (68) 1,4-Naphthoquinone ..... 130-15-4  
 (69) 1-Naphthylamine ..... 134-32-7  
 (70) 2-Naphthylamine ..... 91-59-8  
 (71) o-Nitroaniline; 2-Nitroaniline ..... 88-74-4  
 (72) m-Nitroaniline; 3-Nitroaniline ..... 99-09-2  
 (73) p-Nitroaniline; 4-Nitroaniline ..... 100-01-6  
 (74) Nitrobenzene ..... 98-95-3  
 (75) o-Nitrophenol; 2-Nitrophenol ..... 88-75-5  
 (76) p-Nitrophenol; 4-Nitrophenol ..... 100-02-7  
 (77) N-Nitroso-di-n-butylamine ..... 924-16-3  
 (78) N-Nitrosodiethylamine ..... 55-18-5  
 (79) N-Nitrosodimethylamine ..... 62-75-9  
 (80) N-Nitrosodiphenylamine ..... 86-30-6  
 (81) N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine ..... 621-64-7  
 (82) N-Nitrosomethylethylamine ..... 10595-95-6  
 (83) N-Nitrosopiperidine ..... 100-75-4  
 (84) N-Nitrosopyrrolidine ..... 930-55-2  
 (85) 5-Nitro-o-toluidine ..... 99-55-8  
 (86) Pentachlorobenzene ..... 608-93-5  
 (87) Pentachloronitrobenzene ..... 82-68-8  
 (88) Pentachlorophenol ..... 87-86-5  
 (89) Phenacetin ..... 62-44-2  
 (90) Phenanthrene ..... 85-01-8  
 (91) Phenol ..... 108-95-2  
 (92) p-Phenylenediamine ..... 106-50-3  
 (93) Pronamide ..... 23950-58-5  
 (94) Propionitrile; Ethyl cyanide ..... 107-12-0  
 (95) Pyrene ..... 129-00-0  
 (96) Safrole ..... 94-59-7  
 (97) 1,2,4,5-Tetrachlorobenzene ..... 95-94-3  
 (98) 2,3,4,6-Tetrachlorophenol ..... 58-90-2  
 (99) o-Toluidine ..... 95-53-4  
 (100) 1,2,4-Trichlorobenzene ..... 120-82-1  
 (101) 2,4,5-Trichlorophenol ..... 95-95-4  
 (102) 2,4,6-Trichlorophenol ..... 88-06-2  
 (103) 0,0,0-Triethyl phosphorothioate ..... 126-68-1  
 (104) sym-Trinitrobenzene ..... 99-35-4

(f) The following pesticides, herbicides, and PCBs:

TABLE 2

Constituents for Assessment Monitoring

Common Name <sup>1</sup>	CAS RN <sup>2</sup>
(1) Aldrin	309-00-2
(2) alpha-BHC	319-84-6
(3) beta-BHC	319-85-7
(4) delta-BHC	319-86-8
(5) gamma-BHC; Lindane	58-89-9
(6) Chlordane	See note 5
(7) 2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7
(8) 4,4'-DDD	72-54-8
(9) 4,4'-DDE	72-55-9
(10) 4,4'-DDT	50-29-3

(11) Dieldrin ..... 60-57-1  
 (12) 0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin ..... 297-97-2  
 (13) Dimethoate ..... 60-51-5  
 (14) Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol ..... 88-85-7  
 (15) Disulfoton ..... 298-04-4  
 (16) Endosulfan I ..... 959-98-8  
 (17) Endosulfan II ..... 33213-65-9  
 (18) Endosulfan sulfate ..... 1031-07-8  
 (19) Endrin ..... 72-20-8  
 (20) Endrin aldehyde ..... 7421-93-4  
 (21) Ethyl methanesulfonate ..... 62-50-0  
 (22) Heptachlor ..... 76-44-8  
 (23) Heptachlor epoxide ..... 1024-57-3  
 (24) Methoxychlor ..... 72-43-5  
 (25) Parathion ..... 56-38-2  
 (26) Phorate ..... 298-02-2  
 (27) Polychlorinated biphenyls; PCBs; Aroclors ... See note 6  
 (28) Silvex; 2,4,5-TP ..... 93-72-1  
 (29) 2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid ..... 93-76-5  
 (30) Toxaphene ..... See note 7

(g) The following notes apply to subsections (b) through (f):

<sup>1</sup>Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

<sup>2</sup>Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included. Where "Dissolved" is entered, all species in a filtered sample of the ground water that contain this element are included.

<sup>3</sup>Xylene (total). This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

<sup>4</sup>This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2'-oxybis[2-chloro- (CAS RN 39638-32-9).

<sup>5</sup>Chlordane. This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6).

<sup>6</sup>Polychlorinated biphenyls (CAS RN 1336-36-3). This category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5).

<sup>7</sup>Toxaphene. This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), that is, chlorinated camphene.

<sup>8</sup>Xylene (total). This entry includes o-xylene (CAS RN 96-47-6); m-xylene (CAS RN 108-38-3); p-xylene (CAS RN 106-42-3); and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7).

(Solid Waste Management Board; 329 IAC 10-21-16; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1880)

SECTION 83. 329 IAC 10-22-2 IS AMENDED TO READ AS FOLLOWS:

329 IAC 10-22-2 Closure plan

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

Sec. 2. (a) The owner, operator, or permittee of an MSWLF shall

prepare a written closure plan. The plan must be submitted with the permit application in accordance with 329 IAC 10-11 and be approved by the commissioner as part of the permit. The approved closure plan becomes a condition of the permit upon approval.

(b) The owner, operator, or permittee of ~~MSWLFs~~ **an MSWLF** permitted under 329 IAC 1.5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996, that:

- (1) closed on or before January 1, 1998, must close under the MSWLF's existing approved closure plans; or
- (2) intend to close after January 1, 1998, must:
  - (A) revise closure plans to meet the requirements of subsection (c); and
  - (B) submit the revised plans to the commissioner for approval within six (6) months after the effective date of this article or the anniversary date of the approved closure plans, whichever is earlier.

(c) The closure plan must identify the steps necessary to completely close the MSWLF at any point during its active life in accordance with section 1 of this rule. The plan must be certified by a registered professional engineer. The closure plan must include the following:

- (1) A description of the steps that will be used to partially close, if applicable, and finally close the MSWLF in accordance with section 1 of this rule.
- (2) A listing of labor, materials, and testing necessary to close the MSWLF.
- (3) An estimate of the expected year of closure and a schedule for final closure. The schedule must include the following:
  - (A) The total time required to close the MSWLF.
  - (B) The time required for completion of intervening closure activities.
- (4) An estimate of the maximum inventory of wastes that will be on-site over the active life of the MSWLF.
- (5) An estimate of the cost per acre of providing final cover and vegetation. Such cost must reflect cost necessary to close the MSWLF by the third party as required by the approved plan, but must not be less than:
  - (A) ~~twenty twenty-one thousand dollars (\$20,000)~~ **(\$21,000)** per acre to close MSWLF units that are constructed with only a soil liner; and
  - (B) ~~seventy-five seventy-eight thousand seven hundred fifty dollars (\$75,000)~~ **(\$78,750)** per acre for MSWLF units that are constructed with a composite bottom liner system.
- (C) **Existing closure plan cost estimates approved before the latest effective date of this section are not required to be revised by the owner, operator, or permittee to meet the minimum cost estimates given in clauses (A) and (B).**
- (D) **The minimum cost estimates given in clauses (A) and (B) are valid for one (1) year after the latest effective date of this section.**
- (E) **If an application is submitted for a new MSWLF or a major modification one (1) year after the latest effective date of this section, the owner, operator, or permittee must adjust these cost estimates for inflation as described in 329 IAC 10-39-2(c)(1).**
- (6) **For new major modifications**, the closure cost estimate must include a ten percent (10%) contingency cost on the total closure cost of the MSWLF.
- (7) If the owner, operator, or permittee of an MSWLF utilizes the **incremental closure trust fund option or funds the letter of credit on an annual basis; standard**, as contained in ~~329 IAC 10-39~~ **329 IAC**

**10-39-2(b)(3)(B)**, then for each yearly period following the beginning of operation of the MSWLF, the closure plan must specify the maximum area of the MSWLF into which municipal solid waste will have been deposited through that year of the MSWLF's life and must delineate such areas on the copy of the facility's final contour map. The closure plan must list closure cost estimates for each year of the anticipated life of the facility equal to the costs specified by subdivisions (5) and (6).

- (8) An estimate of the yearly maintenance costs for a dike or dikes required under 329 IAC 10-16-2.
- (9) A construction quality assurance and construction quality control plan for the construction and installation of the final cover system as required by this rule.
- (10) A description of the final cover, designed in accordance with this rule, and the methods and procedures to be used to install the cover.
- (11) An estimate of the largest area of the MSWLF ever requiring a final cover as required under this rule at any time during the active life.
- (12) If property is used to fulfill or reduce the cost of closure funding, the property must not be sold, relinquished, or used for any other purpose. If the property is proposed to be sold, relinquished, or used for any other purpose, the owner, operator, or permittee shall complete the following requirements:
  - (A) The closure plan must be updated under this section and submitted to the commissioner.
  - (B) The closure financial responsibility must be updated under 329 IAC 10-39 and submitted to the commissioner.
  - (C) The owner, operator, or permittee shall receive approval from the commissioner for the requirements under clauses (A) and (B) prior to selling, relinquishing, or using the property for any other purpose.

*(Solid Waste Management Board; 329 IAC 10-22-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1882; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3859)*

SECTION 84. 329 IAC 10-22-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-22-3 Partial closure certification**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 3. (a) The owner, operator, or permittee of an MSWLF may submit partial closure certification for portions of the MSWLF that have received final cover and are graded and have established vegetation in accordance with the applicable provisions of this rule, 329 IAC 10-20, and the approved closure plan prior to closure of the MSWLF.

(b) The owner, operator, or permittee of an MSWLF shall submit to the commissioner a certification signed by the owner, operator, or permittee and an independent registered professional engineer that specifically identifies the closed areas and that specifies that the partial closure has been accomplished in accordance with the approved closure plan and this article. Certification of partial closure must not be made for an area until the final cover has been completely provided for that area and vegetation has been established.

(c) The partial closure certification will be deemed adequate unless, within ~~one hundred fifty (150)~~ **ninety (90)** days of receipt of the partial closure certification, the commissioner issues a notice of deficiency of closure, including action necessary to correct the deficiency.

(d) A partial closure for leachate generation rate, as required by 10-23-3(c)(5)(B), may be granted if the owner, operator, or permittee of an MSWLF provides actual leachate generation rate data of an area for at least a two (2) years duration after final cover is installed and certified.

(e) Fifteen (15) days prior to initiation of partial closure of a certain area, the owner, operator, or permittee of an MSWLF shall notify the commissioner in writing that they will be constructing a final cover. (Solid Waste Management Board; 329 IAC 10-22-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1883; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2813; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3860)

SECTION 85. 329 IAC 10-22-5 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-22-5 Completion of closure and final cover**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
Affected: IC 13-20; IC 36-9-30

Sec. 5. (a) The owner, operator, or permittee of an MSWLF shall complete closure activities and complete application of final cover within one hundred eighty (180) days on ~~an~~ any area in the MSWLF as approved in the closure plan that:

- (1) has received the area's final waste volume; or
- (2) is filled to the area's final approved waste elevation.

(b) Upon application for an extension by the owner, operator, or permittee, a one (1) time extension of the closure period may be granted by the commissioner if the owner, operator, or permittee demonstrates that closure will, by necessity, take longer than one hundred eighty (180) days and the owner, operator, or permittee has taken and will continue to take all steps to prevent threats to human health and the environment. The extension of the closure period must not be longer than three hundred sixty-five (365) days immediately following the one hundred eighty (180) days of the original closure period. (Solid Waste Management Board; 329 IAC 10-22-5; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1883; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2813; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3860)

SECTION 86. 329 IAC 10-22-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-22-6 Final cover requirements for new MSWLF units or existing MSWLF units that have a composite bottom liner and a leachate collection system**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 36-9-30

Sec. 6. (a) The owner, operator, or permittee of an MSWLF containing new MSWLF units or existing MSWLF units that have a composite bottom liner system and a leachate collection system shall install a final cover system as defined in subsection (b) within one hundred eighty (180) days on any area in the MSWLF units as approved in the closure plan that:

- (1) has received the final waste volume; or
  - (2) is filled to the approved final waste elevation;
- or as approved under section 5(b) of this rule.

(b) Final cover systems for new MSWLF units or existing MSWLF units that have a composite bottom liner system must consist of the

following, starting from the top of the municipal solid waste mass (waste placement) to the top of the final cover system:

(1) A methane gas venting layer must be installed directly over the waste. This layer must consist of twelve (12) inches of drainage layer material that has a hydraulic conductivity of  $1 \times 10^{-3}$  centimeters per second or more. Geosynthetic material (geotextile, geonet, both, or other material as approved by the commissioner) may be substituted for drainage layer material in the gas venting layer if equivalent or better performance is demonstrated. The owner, operator, or permittee must demonstrate that transmissivity and permittivity provide for the anticipated gas discharge quantity.

(2) A soil barrier layer must be installed over the methane gas venting layer. The soil barrier must consist of a lower component of twelve (12) inches of structural fill and an upper component of twelve (12) inches of compacted earthen material with a hydraulic conductivity of  $1 \times 10^{-6}$  centimeters per second or less. The upper component must be soil of Unified Soil Classification ML, CL, MH, CH, or OH. Other suitable material approved by the commissioner may be used if it provides an adequate level of protection to human health and the environment. Grain size, Atterberg limits, and hydraulic conductivity tests as approved by the commissioner must be performed to confirm the quality of the final cover.

(3) A minimum thirty (30) mil geomembrane top liner must be installed directly in contact with the upper portion of the soil barrier layer. If the geomembrane is composed of high density polyethylene (HDPE), then it must be at least sixty (60) mil thick. The commissioner may require an increase in the thickness of the geomembrane if it is determined that increased thickness is necessary to prevent failure under stresses caused by construction equipment and waste settlement during the post-closure care period.

(4) A drainage layer must be installed over the geomembrane liner. The drainage layer must consist of twelve (12) inches of material that has a hydraulic conductivity of  $1 \times 10^{-3}$  centimeters per second or more. If geosynthetic materials are used as a drainage layer, the effective transmissivity must be equivalent to twelve (12) inches of drainage layer with a hydraulic conductivity of  $1 \times 10^{-3}$  centimeters per second or more.

(5) A top protective soil layer must overlay the drainage layer. This layer must consist of at least eighteen (18) inches of earthen material. If geosynthetic materials are used as a drainage layer, at a minimum, thirty (30) inches of earthen material must be placed on top of the geosynthetic materials. The protective soil layer material must be designed to not clog the drainage layer.

(6) A vegetative layer must overlay the top protective layer. This layer must consist of at least six (6) inches of earthen material capable of sustaining vegetation. In any case, a total thickness of earthen material over the geomembrane top liner must not be less than thirty-six (36) inches.

(7) The maximum projected erosion rate of the final cover must be no more than five (5) tons per acre per year.

(8) The final cover must have a slope no less than four percent (4%) or two and twenty-nine hundredths (2.29) degrees and no greater than thirty-three percent (33%) or eighteen and twenty-six hundredths (18.26) degrees.

(c) The requirement in subsection (b)(1) may be waived by the commissioner if the following apply:

(1) The MSWLF has a permitted active gas recovery and extraction system in place.

(2) The permitted active gas extraction system at the MSWLF extracts or recovers at least sixty percent (60%) of the total volume of landfill gas produced or generated by the MSWLF.

*(Solid Waste Management Board; 329 IAC 10-22-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1883; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3861)*

SECTION 87. 329 IAC 10-22-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-22-7 Final cover requirements for existing MSWLF units constructed without a composite bottom liner**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 7. (a) The owner, operator, or permittee of an MSWLF containing existing MSWLF units constructed without a composite bottom liner shall install a final cover system as appropriate to subsection (b) or (c) within one hundred eighty (180) days on any area in the MSWLF units **as approved in the closure plan** that:

- (1) has received the final waste volume; or
  - (2) is filled to the approved final waste elevation;
- unless otherwise approved by the commissioner or as approved under section 5(b) of this rule.

(b) Unless otherwise approved by the commissioner, final cover systems for existing MSWLF units constructed with a soil bottom liner and a leachate collection system that were permitted under 329 IAC 2, which was repealed in 1996, and closing after January 1, 1998, must consist of the following:

- (1) On slopes equal to or less than fifteen percent (15%) or eight and fifty-three hundredths (8.53) degrees, the final cover must be constructed as follows:

(A) A twenty-four (24) inch barrier layer of soil of the Unified Soil Classification ML, CL, MH, CH, or OH directly over the waste. Other suitable material approved by the commissioner may be used if it provides an adequate level of protection to human health and the environment. The soil must be compacted to achieve a hydraulic conductivity equal to  $1 \times 10^{-7}$  centimeters per second or less. Grain size, Atterberg limits, and hydraulic conductivity tests as approved by the commissioner or as required by this article must be performed to confirm the quality of the final cover.

(B) A vegetative layer must overlay the top protective layer. This layer must consist of at least six (6) inches of earthen material capable of sustaining vegetation.

- (2) On slopes greater than fifteen percent (15%) or eight and fifty-three hundredths (8.53) degrees, the final cover must be constructed as follows:

(A) A twenty-four (24) inch barrier layer of soil of the Unified Soil Classification ML, CL, MH, CH, or OH directly over the waste. Other suitable material approved by the commissioner may be used if it provides an adequate level of protection to human health and the environment. The soil must be compacted to achieve a hydraulic conductivity equal to  $1 \times 10^{-6}$  centimeters per second or less. Grain size, Atterberg limits, and hydraulic conductivity tests as approved by the commissioner or as required by this article must be performed to confirm the quality of the final cover.

(B) A vegetative layer consisting of at least six (6) inches of earthen material capable of sustaining vegetation must overlay the barrier layer.

(C) An increase in the thickness of the layers required in this subdivision may be required by the facility permit or the commissioner.

- (3) The maximum projected erosion rate of the final cover must be no more than five (5) tons per acre per year.

- (4) The final cover must have a slope:

(A) no less than four percent (4%) or two and twenty-nine hundredths (2.29) degrees; and

(B) no greater than thirty-three percent (33%) or eighteen and twenty-six hundredths (18.26) degrees.

(c) Unless otherwise approved by the commissioner, final cover systems for existing MSWLF units constructed without a soil bottom liner or a leachate collection system that were permitted under 329 IAC 1.5, which was repealed in 1989, or 329 IAC 2, which was repealed in 1996, and closing after January 1, 1998, must consist of the following:

- (1) On slopes equal to or less than fifteen percent (15%) or eight and fifty-three hundredths (8.53) degrees, the final cover not including benches, swales, and drainage features, must be constructed as specified in section 6(b)(1) through 6(b)(7) of this rule.

(2) On slopes greater than fifteen percent (15%) or eight and fifty-three hundredths (8.53) degrees, the final cover must be constructed as specified in subsection (b)(2).

(3) The maximum projected erosion rate of the final cover must be no more than five (5) tons per acre per year.

- (4) The final cover must have a slope:

(A) not less than four percent (4%) or two and twenty-nine hundredths (2.29) degrees; and

(B) not greater than thirty-three percent (33%) or eighteen and twenty-six hundredths (18.26) degrees.

*(Solid Waste Management Board; 329 IAC 10-22-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1884; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2813; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3861)*

SECTION 88. 329 IAC 10-22-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-22-8 Final closure certification**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 8. (a) Following closure of an MSWLF unit at an MSWLF, the owner, operator, or permittee shall submit to the commissioner a certification signed by the owner, operator, or permittee and an independent registered professional engineer that the partial closure involving an MSWLF unit or final closure of the entire MSWLF has been completed in accordance with the approved closure plan. Certification of closure must not be made for an area until the final cover has been completed and vegetation has been established.

(b) Following final closure of all MSWLF units at an MSWLF, the owner, operator, or permittee shall record with the county land recording authority, a notation on the deed to the MSWLF property, or some other instrument normally examined during title search, and notify the commissioner in writing that the notation has been recorded. The notation on the deed must in perpetuity notify any potential purchaser of the property that the land has been used as a MSWLF. At a minimum, the recording must contain the following:

- (1) The general types and location of waste.

(2) The depth of fill.

(3) A plot plan, with surface contours at intervals of two (2) feet, which must indicate:

(A) surface water run-off directions;

(B) surface water diversion structures after completion of the operation; and

(C) final grade contours.

- (4) A statement that no construction, installation of **ground water**

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**monitoring** wells, pipes, conduits, or septic systems, or any other excavation will be done on the property without approval of the commissioner.

(c) The final closure certification will be deemed adequate unless within ~~one hundred fifty (150)~~ **ninety (90)** days of receipt of the final closure certification the commissioner issues a notice of deficiency of closure, including action necessary to correct the deficiency. (*Solid Waste Management Board; 329 IAC 10-22-8; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1885; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2814; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3862*)

SECTION 89. 329 IAC 10-23-2 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-23-2 Post-closure duties

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 2. (a) The owner, operator, or permittee of an MSWLF has the following duties after closure:

- (1) Post-closure activities must be performed in accordance with the approved post-closure plan as specified in section 3 of this rule.
- (2) Inspection of the MSWLF at least twice per year with a written report on the condition of the MSWLF to be submitted to the commissioner.
- (3) Maintenance of the integrity of the geomembrane cap, if applicable, and the minimum thickness of final cover and vegetation as required by 329 IAC 10-20 and 329 IAC 10-22 or as approved by the commissioner.
- (4) Maintenance of the final contours of the MSWLF in accordance with the applicable standards of 329 IAC 10-20 and 329 IAC 10-22 and, at a minimum, to provide that no ponding of water occurs on filled areas.
- (5) Control of any vegetation on vehicular access ways to monitoring wells as required by 329 IAC 10-20-2(d).
- (6) Control of vegetation at the MSWLF as necessary to enable determination of the need for slope and cover maintenance and leachate outbreak abatement.
- (7) Maintenance of access control and benchmarks at the MSWLF.
- (8) Maintenance and monitoring of the dike or dikes required under 329 IAC 10-16-2.
- (9) If ownership of the land or MSWLF changes at any time during the post-closure period, the new owner must have a written agreement with the past owner which states the new owner will monitor and maintain the dike or dikes required by 329 IAC 10-16-2 during the subsequent post-closure period.
- (10) Maintenance and monitoring of leachate collection and treatment systems and methane control systems.
- (11) Control of any leachate or gas generated at the MSWLF as required by 329 IAC 10-20.
- (12) Erosion and sediment control measures must be instituted to comply with 329 IAC 10-20-12.
- (13) An MSWLF that closes:
  - (A) prior to the effective date required by 40 CFR 258 for the MSWLF units' ground water monitoring, must continue to monitor ground water as required by the rules in force at the time the facility entered into post-closure;
  - (B) on or after the effective date required by 40 CFR 258 for the MSWLF units' ground water monitoring, must monitor ground water after the effective date of this article as required by 329 IAC 10-21; or
  - (C) under any other article is required to follow the:

- (i) post-closure plan as required by the rules in force at the time the MSWLF entered into post-closure; or
- (ii) rules in force at the time the MSWLF entered into post-closure if the rules in force do not require a post-closure plan.

(14) In addition to the corrective action program required by the rules under which the facility closed, the commissioner may require performance of corrective action measures within 329 IAC 10-21-13 if the MSWLF:

- (A) closed prior to the effective date of this article;
- (B) is monitoring ground water in accordance with the rules in force at the time the MSWLF entered into post-closure; and
- (C) finds a corrective action program is applicable under the rules in force at the time the MSWLF entered post-closure.

(b) Post-closure requirements imposed by this section must be followed for a period of thirty (30) years after the following applicable date:

- (1) If the final closure certification is deemed adequate, the date the final closure certification is received by the commissioner in accordance with 329 IAC 10-22-8(a).
- (2) If the final closure certification is deemed inadequate, the date the commissioner approves any actions necessary to correct items listed in a notice of deficiency of closure certification under 329 IAC 10-22-8(c).

(c) The length of the post-closure care period may be increased by the commissioner if the commissioner determines that the lengthened period is necessary to protect human health and the environment. The standards to determine an increased post-closure care period include, but are not limited to:

- (1) stability of final cover;
- (2) maintenance problems with an MSWLF certified as closed;
- (3) evidence of ground water contamination;
- (4) quantity of gas produced and managed; or
- (5) reliability of ground water monitoring well system.

(*Solid Waste Management Board; 329 IAC 10-23-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1886; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2815; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3863*)

SECTION 90. 329 IAC 10-23-3 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-23-3 Post-closure plan

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3

**Affected:** IC 13-20; IC 36-9-30

Sec. 3. (a) The owner, operator, or permittee of an MSWLF shall have a written post-closure plan. The post-closure plan must be submitted with the permit application in accordance with 329 IAC 10-11 and be approved by the commissioner. The approved post-closure plan must become a condition of the permit. If the permit expires or is revoked, the post-closure plan remains effective and enforceable during the post-closure period. If the plan is determined to be unacceptable, the commissioner shall identify the items needed to make it complete.

(b) The owner, operator, or permittee of existing MSWLFs shall revise and submit post-closure plans meeting the requirements of this rule within six (6) months after the effective date of this article or the anniversary date of the approved post-closure plan, whichever is earlier.

(c) The post-closure plan must identify the activities that will be

carried on after closure under section 2 of this rule and must include at least the following:

- (1) A description of the planned ground water monitoring activities and the frequency at which they will be performed.
- (2) A description of the planned maintenance activities and the frequency at which they will be performed.
- (3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property must not disturb the integrity of the final cover, liner, or any other component of the containment system, or the function of the monitoring system, unless necessary to comply with this article. The commissioner may approve other disturbances if the owner, operator, or permittee demonstrates that disturbance of the final cover, liner, or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.
- (4) The name, address, and telephone number of the owner, operator, or permittee with responsibility for maintaining the site after closure whom the commissioner may contact about the MSWLF during the post-closure period.
- (5) A post-closure cost estimate in accordance with 329 IAC 10-39. Post-closure costs must be calculated based on the cost necessary for the work to be performed by a third party for thirty (30) years of the post-closure period and must include the following:
  - (A) For post-closure maintenance of final cover and vegetation, the amount per acre must be ten percent (10%) of the cost calculated under 329 IAC 10-22-2(c)(5) multiplied by the total acreage of the site permitted for filling.
  - (B) At a minimum, the amount of funds necessary for leachate treatment and disposal must be based on the following gallons per acre per day over the thirty (30) year post-closure period:

Year	Gallons Per Acre Per Day (GPAD)
1-5	150
6-10	80
11-15	50
16-20	30
21-25	20
26-30	10

The commissioner may increase or decrease this amount of funding if it is determined that, based on a site-specific basis, more or less funds are necessary. **A partial closure for leachate generation rate, as required by 10-22-3(d), may be granted, if the owner, operator, or permittee of an MSWLF provides actual leachate generation rate data of an area for at least a two (2) years duration after final cover is installed and certified.**

- (C) At a minimum, the amount of funds necessary to provide for post-closure activities must include funds for the following:
  - (i) Ground water monitoring and well maintenance, **including piezometers when applicable.**
  - (ii) Methane monitoring and maintenance.
  - (iii) Maintenance of drainage and erosion control system.
  - (iv) Maintenance of leachate collection system.
  - (v) Maintenance of access control.
  - (vi) Control of vegetation.
  - (vii) Maintenance of the dike or dikes if required under 329 IAC 10-16-2.

- (6) The post-closure cost estimate must include a twenty-five percent (25%) contingency cost based on total post-closure cost.

(7) If the property is used to fulfill or reduce the cost of post-closure funding, the property must not be sold, relinquished, or used for any other purpose. If the property is proposed to be sold, relinquished, or used for any other purpose, the owner, operator, or permittee shall complete the following requirements:

- (A) The post-closure plan must be updated under this section and submitted to the commissioner.
- (B) The post-closure financial responsibility must be updated under 329 IAC 10-39 and submitted to the commissioner.
- (C) The owner, operator, or permittee shall receive approval from the commissioner for the requirements under clauses (A) and (B) prior to selling, relinquishing, or using the property for any other purpose.

(d) Proposed changes to the approved post-closure plans may be submitted to the commissioner during the post-closure period. The commissioner shall provide notification that the modification is not acceptable within sixty (60) days of receiving the modification request. If the owner or operator does not receive notification from the commissioner within sixty (60) days, the post-closure plan modifications may be installed in accordance with documentation provided to the commissioner. *(Solid Waste Management Board; 329 IAC 10-23-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1887; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2816; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3864)*

SECTION 91. 329 IAC 10-23-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-23-4 Post-closure certification**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

Sec. 4. When the post-closure care requirements of this rule have been completed, the owner, operator, or permittee shall submit a certification statement signed by the owner, operator, or permittee and an independent registered professional engineer that the post-closure care requirements have been met and the MSWLF has stabilized. The post-closure certification will be deemed adequate, unless within ~~one hundred fifty (150)~~ **ninety (90)** days of receipt of the post-closure certification and subsequent review, the commissioner issues notice of the deficiency of post-closure, including actions necessary to correct the deficiency. *(Solid Waste Management Board; 329 IAC 10-23-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1887; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3865)*

SECTION 92. 329 IAC 10-24-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-24-4 Hydrogeologic study**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 36-9-30

Sec. 4. (a) An application for restricted waste site Type I or Type II or nonmunicipal solid waste landfill must be accompanied by a proposal for the installation of monitoring devices, upgradient and downgradient from the landfill with respect to ground water flow direction. The proposal must consist of a hydrogeologic study that provides the information specified in subsection (b). The commissioner may modify the requirements for the proposal dependent on site characteristics. The proposal must be certified by a registered professional engineer or certified professional geologist, either of whom shall have education or professional experience in hydrogeology or hydrology.

(b) The proposal must provide the following information by means of maps, diagrams, and narrative:

(1) Summary of regional and site-specific geologic information obtained from recent or previous soil borings, coal borings, area **ground water monitoring** well logs, and published reports.

(2) Water table and potentiometric surface maps of the proposed site, including ground water flow directions as follows:

(A) Such maps must be prepared from data from cased holes or piezometers capable of measuring hydraulic head at a maximum screen interval of five (5) feet. This limitation on the maximum length of the screened interval must not apply to those piezometers used to determine a water table surface. At least:

- (i) three (3) such devices must be necessary for fill areas less than twenty (20) acres;
- (ii) four (4) such devices for fill areas between twenty (20) and fifty (50) acres;
- (iii) five (5) such devices for fill areas between fifty (50) and ninety (90) acres; and
- (iv) six (6) such devices for fill areas greater than ninety (90) acres.

The required devices must be evenly distributed over the site. In addition, vertical hydraulic gradients must be measured, at a minimum, of two (2) separate points at the site. Additional nested piezometers or **ground water monitoring** wells may be required by the commissioner to adequately determine vertical components. When more than one (1) aquifer is present within the specified boring depths required in section 3(1)(C) of this rule, individual water table and potentiometric maps may be required.

(B) Monthly water level measurements over a period of at least six (6) months, along with water table and potentiometric surface maps constructed from each measurement event, must be submitted to the commissioner prior to operation of the facility.

(C) The proposal must discuss the evidence and potential of significant components of vertical ground water flow. If there are significant components of vertical flow, cross-sectional representations of equipotential lines and ground water flow direction must be provided that adequately represent the flow beneath the site.

(3) Identification of aquifers below the proposed site to the depth required by section 3(1)(C) of this rule, including the following information:

- (A) Aquifer thickness or thicknesses.
- (B) Lithology.
- (C) Estimated hydraulic conductivity and effective porosity.
- (D) Presence of low permeability units above or below.
- (E) Whether the aquifers are confined or unconfined.

In addition, a general identification and description must be provided for aquifers known to exist from the geologic literature and area **ground water monitoring** well logs.

(4) Known or projected information on hydraulic connections of ground water to surface water and hydraulic connections between different aquifers at site.

(5) Information on the current and proposed use of ground water in the area, including any available information on existing quality of ground water in the aquifer or aquifers.

(6) Diagrammatic representation of proposed **ground water monitoring** well design and construction, including any available information on existing quality of ground water in the aquifer or aquifers.

(7) Proposed **ground water monitoring** well locations, including length and elevation of screened intervals.

(c) The commissioner may require that pumping tests or similar

hydraulic tests be performed to provide a more accurate determination of aquifer characteristics where necessary to determine the adequacy of site or monitoring system design. (*Solid Waste Management Board; 329 IAC 10-24-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1890; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 93. 329 IAC 10-29-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-29-1 Monitoring devices**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

**Affected:** IC 13-30-2; IC 36-9-30

Sec. 1. (a) All new restricted waste sites Type I and Type II and nonmunicipal solid waste landfills must have ground water monitoring devices. All existing nonmunicipal solid waste landfills in operation on the effective date of 329 IAC 2, which was repealed in 1996, that do not have ground water monitoring devices must install such devices on or before September 1, 1989.

(b) The number and location of monitoring devices are as follows:

(1) The following for new facilities:

(A) The ground water monitoring system must consist of a sufficient number of monitoring devices, installed at appropriate locations and depths, to yield ground water samples from the aquifer or aquifers that represent the quality of both background water that has not been affected by leachate from a facility and the quality of ground water passing the monitoring boundary of the facility. If the aquifer to be monitored exceeds the depth specified in 329 IAC 10-24-3(1)(C), the commissioner may allow alternative placement of monitoring devices.

(B) The number, spacing, and depths of monitoring devices must be proposed by the applicant in the site-specific geological study required under 329 IAC 10-24.

(C) A minimum of four (4) ground water monitoring devices, one (1) upgradient and three (3) downgradient, must be installed.

(2) For existing facilities under subsection (a), as follows:

(A) A minimum of four (4) ground water monitoring devices, one (1) upgradient and three (3) downgradient, must be installed at facilities that do not have an existing ground water monitoring system that meets the requirements of the commissioner.

(B) Locations and installation of monitoring devices must be in accordance with a plan submitted to and approved by the commissioner.

(c) The commissioner may request notification in advance of the date and time of the installation of the monitoring devices.

(d) The owner or operator of a restricted waste site Type I or Type II or nonmunicipal solid waste landfill shall prepare and submit to the commissioner at least annually a ground water flow map or maps as necessary to indicate seasonal ground water. If data acquired during operation of the facility indicates that ground water flow directions are other than as anticipated in the ground water monitoring system design, the commissioner may require additional **ground water monitoring** wells at the facility.

(e) If for any reason a **ground water monitoring** well or other monitoring device is destroyed or otherwise fails to properly function, the owner or operator of a restricted waste site Type I or Type II or nonmunicipal solid waste landfill shall notify the commissioner within ten (10) days of discovery. The device must be repaired if possible. If the device cannot be repaired, it must be properly abandoned and

replaced within sixty (60) days of the notification unless the owner or operator is notified otherwise in writing by the commissioner.

- (f) As used in this rule, "monitoring devices" includes the following:
- (1) Ground water monitoring wells.
  - (2) Suction lysimeters.
  - (3) Moisture probes.
  - (4) Similar monitoring devices.

(g) As used in this rule, "monitoring boundary of the facility" means the vertical plane provided by the monitoring devices hydraulically downgradient from the facility. The downgradient monitoring devices that constitute the monitoring boundary of the facility must be located within fifty (50) feet of the solid waste boundary or the property line, whichever is closer to the solid waste boundary, except where fifty (50) feet is not possible because of site topography or geology. In the case of existing facilities that have ground water monitoring devices approved by the commissioner prior to the effective date of this article, those approved devices must define the monitoring boundary of the facility. (*Solid Waste Management Board; 329 IAC 10-29-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1900; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2047; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 94. 329 IAC 10-30-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-30-4 Closure plan**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 4. (a) Owners or operators of restricted waste sites Type I and Type II and nonmunicipal solid waste landfills shall have a written closure plan. The closure plan must be submitted with the permit application in accordance with 329 IAC 10-11 and be approved by the commissioner as part of the permit. The approved closure plan will become a condition of the permit.

(b) The closure plan must identify the steps necessary to completely close the restricted waste site Type I or Type II or nonmunicipal solid waste landfill at any point during its intended life in accordance with section 1 of this rule. The plan must be certified by a registered professional engineer. The closure plan must include the following:

- (1) A description of the steps that will be used to partially close, if applicable, and finally close the facility in accordance with section 1 of this rule.
- (2) A listing of labor, materials, and testing necessary to close the facility.
- (3) An estimate of the expected year of closure and a schedule for final closure. The schedule must include:
  - (A) the total time required to close the facility; and
  - (B) the time required for completion of intervening closure activities.
- (4) An estimate of the cost per acre of providing final cover and vegetation. Such cost must be that which is necessary for providing the following, but must not be less than five thousand dollars (\$5,000) per acre:
  - (A) Two (2) feet of compacted clay soil.
  - (B) Six (6) inches of topsoil.
  - (C) Vegetation.
  - (D) Certification of closure, including any testing necessary for such certification.
- (5) The closure plan must separately identify any closure costs for items other than providing final cover and vegetation.

(6) The closure plan must list a closure cost estimate equal to the costs specified by subdivision (5) plus the product of the total area of the site permitted for filling and the cost per unit area specified by subdivision (4). Closure costs must be calculated based on the cost necessary for the work to be performed by a third party.

(7) The estimate of the cost per acre of providing final cover and vegetation must be that necessary for providing the activities as specified in the closure plan; however, the sum of the closure cost estimate and post-closure cost estimate must not be less than fifteen thousand dollars (\$15,000) per acre or fraction of an acre covered by the permitted facility.

(8) If the restricted waste site Type I or Type II or nonmunicipal solid waste landfill utilizes the ~~incremental closure trust fund option or funds the letter of credit on an annual basis, standard,~~ as contained in ~~329 IAC 10-39-2, 329 IAC 10-39-2(b)(3)(B),~~ then for each yearly period following the beginning of operation of the facility, the plan must specify the maximum area of the facility into which solid waste will have been deposited through that year of the facility's life and must delineate such areas on the copy of the facility's final contour map. The closure plan must list closure cost estimates for each year of the anticipated life of the facility equal to the costs specified by subdivision (5), plus the product of the noted maximum areas of the site and the cost per unit area specified by subdivision (4).

(*Solid Waste Management Board; 329 IAC 10-30-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1906; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 95. 329 IAC 10-37-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-37-4 Closure plan**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 4. (a) Owners or operators of a restricted waste site Type III and a construction/demolition site shall have a written closure plan. The closure plan must be submitted with the permit application in accordance with 329 IAC 10-11 and be approved by the commissioner as part of the permit. The approved closure plan will become a condition of the permit.

(b) The closure plan, certified by a registered professional engineer, must identify the steps necessary to completely close the restricted waste site Type III or construction/demolition site at any point during its intended life in accordance with section 1 of this rule. The closure plan must include the following:

- (1) A description of the steps that will be used to partially close, if applicable, and finally close the facility in accordance with section 1 of this rule.
- (2) A listing of labor, materials, and testing necessary to close the facility.
- (3) An estimate of the expected year of closure and a schedule for final closure. The schedule must include:
  - (A) the total time required to close the facility; and
  - (B) the time required for completion of intervening closure activities.
- (4) An estimate of the cost per acre of providing final cover and vegetation. Such cost must be that which is necessary for providing the following, but must not be less than five thousand dollars (\$5,000) per acre:
  - (A) Two (2) feet of compacted clay soil.
  - (B) Six (6) inches of topsoil.



(C) Vegetation.

(D) Certification of closure, including any testing necessary for such certification.

(5) The closure plan must separately identify any closure costs for items other than providing final cover and vegetation.

(6) The closure plan must list a closure cost estimate equal to the costs specified by subdivision (5) plus the product of the total area of the site permitted for filling and the cost per unit area specified by subdivision (4). Closure costs must be calculated based on the cost necessary for the work to be performed by a third party.

(7) The estimate of the cost per acre of providing final cover and vegetation must be that necessary for providing the activities as specified in the closure plan; however, the sum of the closure cost estimate and post-closure cost estimate must not be less than fifteen thousand dollars (\$15,000) per acre or fraction of an acre covered by the permitted facility.

(8) If the restricted waste site Type III or the construction/demolition site utilizes the ~~incremental closure trust fund option or funds the letter of credit on an annual basis standard~~, as contained in ~~329 IAC 10-39~~, **329 IAC 10-39-2(b)(3)(B)**, then for each yearly period following the beginning of operation of the facility, the plan must specify the maximum area of the facility into which solid waste will have been deposited through that year of the facility's life and must delineate such areas on the copy of the facility's final contour map. The closure plan must list closure cost estimates for each year of the anticipated life of the facility equal to the costs specified by subdivision (5), plus the product of the noted maximum areas of the site and the cost per unit area specified by subdivision (4).

*(Solid Waste Management Board; 329 IAC 10-37-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1916)*

SECTION 96. 329 IAC 10-39-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-1 Applicability**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 1. (a) This rule applies to all solid waste land disposal facilities that:  
 (1) are required to have a permit by 329 IAC 10-11-1; and  
 (2) apply for a permit after the promulgation of this rule or have an operating permit in effect on the effective date of this article.

(b) The permittee for solid waste land disposal facilities regulated by this rule shall provide financial responsibility for closure and post-closure in accordance with the following:

- (1) Closure and post-closure rules, including:
  - (A) 329 IAC 10-22 and 329 IAC 10-23;
  - (B) 329 IAC 10-30 and 329 IAC 10-31; or
  - (C) 329 IAC 10-37 and 329 IAC 10-38.
- (2) Sections 2 through 5 of this rule.

(c) Solid waste land disposal facilities that have operating permits in effect must not continue to operate unless they have established financial responsibility for post-closure by choosing a financial assurance mechanism under section 3(a) of this rule and by funding the same under section 3(b) of this rule.

(d) Solid waste land disposal facilities that have operating permits in effect must not continue to operate unless they have established financial responsibility for closure by choosing a financial assurance mechanism under section 2(a) of this rule and by funding the same under section 2(b) of this rule.

(e) Solid waste land disposal facilities that apply for permits after the promulgation of this rule must provide financial responsibility as required by ~~329 IAC 10-11-2(b)(12)~~. **329 IAC 10-11-2.5(a)(4)**. The documents establishing both the closure and post-closure financial responsibility must be executed by and approved by the commissioner prior to operation of the facility. In addition, the financial assurance mechanism must be funded under sections 2(b) and 3(b) of this rule prior to operation. *(Solid Waste Management Board; 329 IAC 10-39-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1918)*

SECTION 97. 329 IAC 10-39-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-2 Closure; financial responsibility**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 2. (a) The permittee shall establish financial responsibility for closure of the solid waste land disposal facility. The permittee shall choose from the following options:

- (1) The trust fund option, including the following:
  - (A) The permittee may satisfy the requirements of this section by establishing a trust agreement on forms provided by the commissioner or on such other form as approved by the commissioner.
  - (B) All trust agreements must contain the following:
    - (i) Identification of solid waste land disposal facilities and corresponding closure cost estimates covered by the trust agreement.
    - (ii) The establishment of a trust fund in the amount determined by subsection (b) and guarantee payments from that fund either reimbursing the permittee for commissioner-approved closure work done or making payments to the commissioner for accomplishing required closure work.
    - (iii) The requirement of annual evaluations of the trust to be submitted to the commissioner.
    - (iv) The requirement of successor trustees to notify the commissioner, in writing, of their appointment at least ten (10) days prior to the appointment becoming effective.
    - (v) The requirement of the trustee to notify the commissioner, in writing, of the failure of the permittee to make a required payment into the fund.
    - (vi) The establishment that the trust is irrevocable unless terminated, in writing, with the approval of the permittee, the trustee, and the commissioner.
    - (vii) A certification that the signatory of the trust agreement for the permittee was duly authorized to bind the permittee.
    - (viii) A notarization of all signatures by a notary public commissioned to be a notary public in the state of Indiana at the time of notarization.
    - (ix) The establishment that the trustee is authorized to act as a trustee and is an entity whose operations are regulated and examined by a federal and state of Indiana agency.
    - (x) The requirement of initial payment into the fund be made within thirty (30) days of the commissioner's approval of the trust agreement, and any subsequent payments be made within thirty (30) days of each anniversary of the initial payment.
- (2) The surety bond option, including the following:
  - (A) The permittee may satisfy the requirements of this section by establishing a surety bond on forms provided by the commissioner or on such other forms as approved by the commissioner.
  - (B) All surety bonds must contain the following:
    - (i) The establishment of penal sums in the amount determined by subsection (b).

- (ii) Provision that the surety will be liable to fulfill the permittee's closure obligations upon notice from the commissioner that the permittee has failed to do so.
  - (iii) Provision that the surety may not cancel the bond without first sending notice of cancellation by certified mail to the permittee and the commissioner at least one hundred twenty (120) days prior to the effective date of the cancellation.
  - (iv) Provision that the permittee may not terminate the bond without prior written authorization by the commissioner.
- (C) The permittee shall establish a standby trust fund to be utilized in the event the permittee fails to fulfill closure obligations and the bond guarantee is exercised. Such trust fund must be established in accordance with the requirements of subdivision (1).
- (D) The surety company issuing the bond must be among those listed as acceptable sureties for federal bonds in Circular 570 of the United States Department of the Treasury **and must be authorized to do business in the state of Indiana.**
- (E) The surety will not be liable for deficiencies in the performance of closure by the permittee after the commissioner releases the permittee in accordance with section 6 of this rule.
- (3) The letter of credit option, including the following:
- (A) The permittee may satisfy the requirements of this section by establishing a letter of credit on forms provided by the commissioner or on such other forms as approved by the commissioner.
  - (B) All letters of credit must contain the following:
    - (i) The establishment of credit in the amount determined by subsection (b).
    - (ii) Irrevocability.
    - (iii) An effective period of at least one (1) year and automatic extensions for periods of at least one (1) year unless the issuing institution provides written notification of cancellation by certified mail to both the permittee and the commissioner at least one hundred twenty (120) days prior to the effective date of cancellation.
    - (iv) Provision that, upon written notice from the commissioner, the institution issuing the letter of credit will state that the permittee's obligations have not been fulfilled, and the institution will deposit funds equal to the amount of the letter of credit into a trust fund to be used to ensure the permittee's closure obligations are fulfilled.
  - (C) The permittee shall establish a standby trust fund to be utilized in the event the permittee fails to fulfill its closure obligations and the letter of credit is utilized. Such trust funds must be established in accordance with the requirements of subdivision (1).
  - (D) The issuing institution must be an entity that has the authority to issue letters of credit and whose letters of credit operations are regulated and examined by a federal or Indiana agency.
- (4) The insurance option, including the following:
- (A) The permittee may satisfy the requirements of this section by providing evidence of insurance on forms provided by the commissioner or on such other forms as approved by the commissioner.
  - (B) All insurance must include the following requirements:
    - (i) Be in the amount determined by subsection (b).
    - (ii) Provide that, upon written notification to the insurer by the commissioner that the permittee has failed to perform final closure, the insurer shall make payments in any amount, not to exceed the amount insured, and to any person authorized by the commissioner.
    - (iii) Provide that the permittee shall maintain the policy in full force and effect unless the commissioner consents in writing to termination of the policy.
    - (iv) Provide for assignment of the policy to a transferee permittee.
    - (v) Provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure of the permittee to pay the premium. No policy may be canceled, be terminated, or fail to be renewed unless at least one hundred twenty (120) days prior to such event the commissioner and the permittee are notified by the insurer in writing.
- (C) The insurer shall either be licensed to transact the business of insurance or be eligible to provide insurance as an excess or surplus lines insurer in one (1) or more states.
- (5) The financial test for restricted waste sites option, including the following:
- (A) This financial test is only available for restricted waste sites.
  - (B) If a permittee meets the criteria set forth in item (i) and either item (ii) or (iii), the permittee shall be deemed to have established financial responsibility as follows:
    - (i) Less than fifty percent (50%) of the company's gross revenues are derived from waste management.
    - (ii) The permittee meets the following four (4) tests:
      - (AA) Two (2) of the following three (3) ratios are met:
        - (aa) A ratio of total liabilities to net worth less than two (2.0).
        - (bb) A ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than one-tenth (0.1).
        - (cc) A ratio of current assets to current liabilities greater than one and one-half (1.5).
      - (BB) Net working capital and tangible net worth each at least six (6) times the sum of the current closure and current post-closure cost estimates.
      - (CC) Tangible net worth of at least ten million dollars (\$10,000,000).
      - (DD) Assets in the United States amounting to at least ninety percent (90%) of the permittee's total assets or at least six (6) times the sum of the current closure and current post-closure costs estimates.
    - (iii) The permittee meets the following four (4) tests:
      - (AA) A current rating for the permittee's most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's.
      - (BB) Tangible net worth of at least six (6) times the sum of the current closure and current post-closure cost estimates.
      - (CC) Tangible net worth of at least ten million dollars (\$10,000,000).
      - (DD) Assets located in the United States amounting to at least ninety percent (90%) of the permittee's total assets or at least six (6) times the sum of the current closure and current post-closure estimates.
- (C) To demonstrate the financial test has been met, the permittee shall submit the following documents to the commissioner:
- (i) A form provided by the commissioner, or such other form as approved by the commissioner, signed by the permittee's chief financial officer, demonstrating the applicable criteria have been met.
  - (ii) A copy of an independent certified public accountant's report examining the permittee's financial statements for the latest completed fiscal year.
  - (iii) A special report from the permittee's independent certified public accountant to the permittee stating:
    - (AA) the certified public accountant has compared the data that the letter from the chief financial officer specifies as having been derived from the independently audited, year-end

financial statements for the latest fiscal year with the amounts in such financial statements; and

(BB) in connection with that procedure, no matters come to the attention of the certified public accountant that caused the certified public accountant to believe that the specified data should be adjusted.

(D) The permittee shall submit updated clause (C) documents to the commissioner within ninety (90) days after the close of each fiscal year.

(E) If at any time the permittee fails to meet the financial test, the permittee shall establish an alternate financial responsibility mechanism within one hundred twenty (120) days after the end of the fiscal year for which the year-end financial data shows that the permittee no longer meets the requirements.

(F) The commissioner may disallow use of this test on the basis of qualifications in the opinion expressed in the independent certified public accountant's report examining the permittee's financial statements. An adverse opinion or a disclaimer of opinion will be cause for disallowance. Other qualifications may be cause for disallowance if, in the opinion of the commissioner, they indicate the permittee does not meet the requirements of this subdivision. The permittee shall choose an alternate financial responsibility mechanism within thirty (30) days after notification of the disallowance.

(6) The local government financial test option, including the following:

(A) This financial test is only available for permittees that are local governments. As used in this subdivision, "local government" means a county, municipality, township, or solid waste management district.

(B) A local government permittee that satisfies the following requirements may demonstrate financial assurance up to the amount specified in clause (C):

(i) The local government permittee shall meet the following financial component requirements:

(AA) The local government permittee shall satisfy either of the following as applicable:

(aa) If the local government permittee has outstanding, rated general obligation bonds that are not secured by insurance, a letter of credit, or other collateral or guarantee, the local government permittee shall have a current rating of:

- (1) Aaa, Aa, A, or Baa as issued by Moody's; or
- (2) AAA, AA, A, or BBB as issued by Standard and Poor's;

on all such general obligation bonds.

(bb) The local government permittee shall satisfy the following financial ratios based on the local government permittee's most recent audited annual financial statement:

- (1) A ratio of cash plus marketable securities to total expenditures greater than or equal to five-hundredths (0.05).
- (2) A ratio of annual debt service to total expenditures less than or equal to two-tenths (0.20).

(BB) The local government permittee shall prepare the local government permittee's financial statements in conformity with generally accepted accounting principles (GAAP) for governments and have the financial statements audited by an independent certified public accountant or the state board of accounts.

(CC) A local government permittee is not eligible to assure the local government permittee's obligations under this subdivision if any of the following applies to the local government permittee:

(aa) The local government permittee is currently in default on any outstanding general obligation bonds.

(bb) The local government permittee has any outstanding general obligation bonds rated lower than Baa as issued by Moody's or BBB as issued by Standard and Poor's.

(cc) The local government permittee has operated at a deficit equal to five percent (5%) or more of total annual revenue in each of the past two (2) fiscal years.

(dd) The local government permittee receives an adverse opinion, disclaimer of opinion, or other qualified opinion from the independent certified public accountant or the state board of accounts auditing its financial statement as required under subitem (BB). The commissioner may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the commissioner deems the qualification insufficient to warrant disallowance of use of the test.

(DD) As used in this subdivision, the following terms apply:

(aa) "Cash plus marketable securities" means all the cash plus marketable securities held by the local government permittee on the last day of a fiscal year, excluding cash and marketable securities designated to satisfy past obligations, such as pensions.

(bb) "Debt service" means the amount of principal and interest due on a loan in a given time period, typically the current year.

(cc) "Deficit" means total annual revenues minus total annual expenditures.

(dd) "Total expenditures" means all expenditures, excluding capital outlays and debt repayment.

(ee) "Total revenues" means revenues from all taxes and fees but does not include the proceeds from borrowing or asset sales, excluding revenues from funds managed by the local government permittee on behalf of a specific third party.

(ii) The local government permittee shall meet the following public notice component requirements:

(AA) The local government permittee shall place a reference to the closure and post-closure care costs assured through the financial test into the local government permittee's next comprehensive annual financial report (CAFR) at the time of the next required local government financial test annual submittal or prior to the initial receipt of waste at the facility, whichever is later. Disclosure must include the following:

(aa) Nature and source of closure and post-closure care requirements.

(bb) Reported liability at the balance sheet date.

(cc) Estimated total closure and post-closure care cost remaining to be recognized.

(dd) Percentage of landfill capacity used to date.

(ee) Estimated landfill life in years.

(BB) A reference to corrective action costs must be placed in the CAFR not later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of 329 IAC 10-21-13.

(CC) For the first year the financial test is used to assure costs at a particular facility, the reference may instead be placed in the facility's operating record until issuance of the next available CAFR if timing does not permit the reference to be incorporated into the most recently issued CAFR or budget.

(DD) For closure and post-closure costs, conformance with Government Accounting Standards Board Statement 18 assures compliance with this public notice component.

(iii) The local government permittee shall meet the following record keeping and reporting requirements:

(AA) The local government permittee shall place the following items in the facility's operating record:

(aa) A letter signed by the local government permittee's chief financial officer that completes the following:

- (1) Lists all of the current cost estimates covered by a financial test as described in clause (C).
- (2) Provides evidence and certifies that the local government permittee meets the conditions of item (i)(AA), (i)(BB), and (i)(CC).
- (3) Certifies that the local government permittee meets the conditions of item (ii) and clause (C).

(bb) The local government permittee's independently audited year-end financial statements for the latest fiscal year (except for local government permittees where audits are required every two (2) years when unaudited statements may be used in years when audits are not required), including the unqualified opinion of the auditor, who shall be an independent certified public accountant, or the state board of accounts that conducts equivalent comprehensive audits.

(cc) A report to the local government permittee from the local government permittee's independent certified public accountant or the state board of accounts based on performing an agreed upon procedures engagement relative to the:

- (1) financial ratios required by item (i)(AA)(bb), if applicable; and
- (2) requirements of item (i)(BB), (i)(CC)(cc), and (i)(CC)(dd).

The independent certified public accountant's or state board of accounts' report must state the procedures performed and the findings.

(dd) A copy of the CAFR used to comply with item (ii) or certification that the requirements of General Accounting Standards Board Statement 18 have been met.

(BB) The items required in subitem (AA) must be placed in the facility operating record as follows:

(aa) In the case of closure and post-closure care, either at the time of the next required local government financial test annual submittal or prior to the initial receipt of waste at the facility, whichever is later.

(bb) In the case of corrective action, not later than one hundred twenty (120) days after the corrective action remedy is selected in accordance with the requirements of 329 IAC 10-21-13.

(CC) After the initial placement of the items in the facility's operating record, the local government permittee shall update the information and place the updated information in the operating record within one hundred eighty (180) days following the close of the local government permittee's fiscal year.

(DD) The local government permittee is no longer required to meet the requirements of this item when either of the following occur:

(aa) The local government permittee substitutes alternate financial assurance as specified in this rule.

(bb) The local government permittee is released from the requirements of this rule in accordance with section 6 or 11 of this rule.

(EE) A local government permittee shall satisfy the requirements of the financial test at the close of each fiscal year. If

the local government permittee no longer meets the requirements of the local government financial test, the local government permittee shall, within one hundred twenty (120) days following the close of the local government permittee's fiscal year, complete the following:

(aa) Obtain alternative financial assurance that meets the requirements of this rule.

(bb) Place the required submissions for that assurance in the facility's operating record.

(cc) Notify the commissioner that the local government permittee no longer meets the criteria of the financial test and that alternate assurance has been obtained.

(FF) The commissioner, based on a reasonable belief that the local government permittee may no longer meet the requirements of the local government financial test, may require additional reports of financial condition from the local government permittee at any time. If the commissioner finds, on the basis of such reports or other information, that the local government permittee no longer meets the requirements of the local government financial test, the local government permittee shall provide alternate financial assurance in accordance with this rule.

(GG) The commissioner may disallow use of this test on the basis of qualifications in the opinion expressed in the state board of accounts' annual financial audit of the local government permittee. An adverse opinion or a disclaimer of opinion is cause for disallowance. Other qualifications may be cause for disallowance if, in the opinion of the commissioner, the qualifications indicate the local government permittee does not meet the requirements of this subdivision. The local government permittee shall choose an alternate financial responsibility mechanism within ninety (90) days after notification of the disallowance.

(C) The local government permittee shall complete the calculation of costs to be assured. The portion of the closure, post-closure, and corrective action costs for which a local government permittee can assure under this subdivision is determined as follows:

(i) If the local government permittee does not assure other environmental obligations through a financial test, the local government permittee may assure closure, post-closure, and corrective action costs that equal up to forty-three percent (43%) of the local government permittee's total annual revenue.

(ii) If the local government permittee assures other environmental obligations through a financial test, including those associated with:

(AA) underground injection control (UIC) facilities under 40 CFR 144.62;

(BB) petroleum underground storage tank facilities under 329 IAC 9-8;

(CC) polychlorinated biphenyls (PCB) storage facilities under 40 CFR 761; and

(DD) hazardous waste treatment, storage, and disposal facilities under 329 IAC 3.1-14 or 329 IAC 3.1-15;

the local government permittee shall add those costs to the closure, post-closure, and corrective action costs the local government permittee seeks to assure under this subdivision. The total that may be assured must not exceed forty-three percent (43%) of the local government permittee's total annual revenue.

(iii) The local government permittee shall obtain an alternate financial assurance instrument for those costs that exceed the limits set in this clause.

- (7) The local government guarantee option, including the following:
- (A) A permittee may demonstrate financial assurance for closure, post-closure, and corrective action, as required by sections 2, 3, and 10 of this rule, by obtaining a written guarantee provided by a local government.
  - (B) The guarantor shall meet the requirements of the local government financial test in subdivision (6) and shall comply with the terms of a written guarantee as follows:
    - (i) The guarantee must be effective:
      - (AA) before the initial receipt of waste or at the time of the next required local government financial test annual submittal, whichever is later, in the case of closure and post-closure care; or
      - (BB) no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of 329 IAC 10-21-13.
    - (ii) The guarantee must provide the following:
      - (AA) If the permittee fails to perform any combination of closure, post-closure care, or corrective action of a facility covered by the guarantee, the guarantor shall:
        - (aa) perform or pay a third party to perform any combination of closure, post-closure care, or corrective action as required under this subitem; or
        - (bb) establish a fully funded trust fund as specified in subdivision (1) in the name of the permittee.
      - (BB) The guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the permittee and to the commissioner. Cancellation must not occur during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the permittee and the commissioner as evidenced by the return receipts.
      - (CC) If a guarantee is canceled under subitem (BB), the permittee shall, within ninety (90) days following receipt of the cancellation notice by the permittee and the commissioner, complete the following:
        - (aa) Obtain alternate financial assurance under this rule.
        - (bb) Place evidence of that alternate financial assurance in the facility operating record.
        - (cc) Notify the commissioner.
      - (DD) If the permittee fails to provide alternate financial assurance within the ninety (90) day period under subitem (CC), the guarantor shall complete the following:
        - (aa) Provide alternate assurance within one hundred twenty (120) days following the guarantor's notice of cancellation.
        - (bb) Place evidence of the alternate assurance in the facility operating record.
        - (cc) Notify the commissioner.
  - (C) The permittee shall complete the following record keeping and reporting requirements:
    - (i) The permittee shall place a certified copy of the guarantee along with the items required under subdivision (6)(B)(iii) into the facility's operating record:
      - (AA) before the initial receipt of waste or at the time of the next required local government financial test annual submittal, whichever is later, in the case of closure and post-closure care; or
      - (BB) no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.
    - (ii) The permittee is no longer required to maintain the items specified in this clause when:
      - (AA) the permittee substitutes alternate financial assurance as specified in this rule; or

- (BB) the permittee is released from the requirements of this rule in accordance with section 6 or 11 of this rule.
  - (iii) If a local government guarantor no longer meets the requirements of subdivision (6), the permittee shall, within ninety (90) days, complete the following:
    - (AA) Obtain alternative assurance.
    - (BB) Place evidence of the alternate assurance in the facility operating record.
    - (CC) Notify the commissioner.
- If the permittee fails to obtain alternate financial assurance within the ninety (90) day period, the guarantor shall provide that alternate assurance within the next thirty (30) days.
- (b) Financial responsibility closure cost estimate requirements must be as follows:
    - (1) For purposes of establishing financial responsibility, the permittee shall have a detailed written estimate of the cost of closing the facility based on the following:
      - (A) The closure costs derived under:
        - (i) 329 IAC 10-22-2(c);
        - (ii) 329 IAC 10-30-4(b); or
        - (iii) 329 IAC 10-37-4(b).
      - (B) One (1) of the closure cost estimating standards under subdivision (3).
    - (2) As used in this section, "establishment of financial responsibility" means submission of financial responsibility to the commissioner in the form of one (1) of the options under subsection (a).
    - (3) The permittee shall use one (1) of the following closure cost estimating standards:
      - (A) The entire solid waste land disposal facility closure standard is an amount that equals the estimated total cost of closing the entire solid waste land disposal facility, less an amount representing portions of the solid waste land disposal facility that have been certified for partial closure in accordance with:
        - (i) 329 IAC 10-22-3;
        - (ii) 329 IAC 10-30-5; or
        - (iii) 329 IAC 10-37-5.
      - (B) The incremental closure standard is an amount which, for any year of operation, equals the total cost of closing the portion of the solid waste land disposal facility dedicated to the current year of solid waste land disposal facility operation, plus all closure amounts from all other partially or completely filled portions of the solid waste land disposal facility from prior years of operation that have not yet been certified for partial closure in accordance with:
        - (i) 329 IAC 10-22-3;
        - (ii) 329 IAC 10-30-5; or
        - (iii) 329 IAC 10-37-5.
    - (c) Until final closure of the solid waste land disposal facility is certified, the permittee shall annually review and submit to the commissioner the financial closure estimate derived under this section within thirty (30) days after the annual submittal date. The funding must be established or updated within thirty (30) days after the original effective date of the establishment of responsibility for closure. The funding must be updated within thirty (30) days after the annual submittal date. The submittal must also include a copy of the final contour map of the solid waste land disposal facility that delineates the boundaries of all areas into which waste has been placed as of the annual review and certified by a registered professional engineer or registered land surveyor. In addition, as part of the annual review, the permittee shall revise the closure estimate as follows:

(1) For inflation, using an inflation factor derived from the annual implicit price deflator for gross national product as published by the United States Department of Commerce in its Survey of Current Business. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year as follows:

(A) The first revision is made by multiplying the original closure cost estimate by the inflation factor. The result is the revised closure cost estimate.

(B) Subsequent revisions are made by multiplying the latest revised closure cost estimate by the latest inflation factor.

(2) For changes in the closure plan, whenever such changes increase the cost of closure.

(d) The permittee may revise the closure cost estimate downward whenever a change in the closure plan decreases the cost of closure or whenever portions of the solid waste land disposal facility have been certified for partial closure under:

- (1) 329 IAC 10-22-3;
- (2) 329 IAC 10-30-5; or
- (3) 329 IAC 10-37-5.

*(Solid Waste Management Board; 329 IAC 10-39-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1919; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2817; filed Feb 26, 1999, 5:45 p.m.: 22 IR 2228; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3866; errata filed Sep 8, 1999, 11:38 a.m.: 23 IR 27)*

SECTION 98. 329 IAC 10-39-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-3 Post-closure; financial responsibility**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 3. (a) The permittee shall establish financial responsibility for post-closure care of the solid waste land disposal facility. The permittee shall choose from the following options:

- (1) The trust fund option, including the following:
  - (A) The permittee shall establish a trust agreement on forms provided by the commissioner or on such other forms as approved by the commissioner.
  - (B) All trust agreements must conform to the requirements detailed in section 2(a)(1)(B) of this rule, with the exception that the term "post-closure" be substituted for the term "closure".
- (2) The surety bond option, including the following:
  - (A) The permittee shall establish a surety bond on forms provided by the commissioner or on such other form as approved by the commissioner.
  - (B) All surety bonds must conform to the requirements detailed in section 2(a)(2)(B) through 2(a)(2)(E) of this rule, with the exception that the term "post-closure" be substituted for the term "closure".
- (3) The letter of credit option, including the following:
  - (A) The permittee shall establish a letter of credit on forms provided by the commissioner or on such other forms as approved by the commissioner.
  - (B) All letters of credit must conform to the requirements detailed in section 2(a)(3)(B) through 2(a)(3)(D) of this rule, with the exception that the term "post-closure" be substituted for the term "closure".
- (4) The insurance option, including the following:
  - (A) The permittee shall provide evidence of insurance on forms provided by the commissioner or on such other forms as approved by the commissioner.

(B) All insurance must conform to the requirements detailed in section 2(a)(4)(B) through 2(a)(4)(C) of this rule, with the exception that the term "post-closure" be substituted for the term "closure".

(5) The financial test for restricted waste sites option, including the following:

- (A) This financial test is only available for restricted waste sites.
- (B) If a permittee meets the criteria set forth in section 2(a)(5)(B) through 2(a)(5)(D) of this rule, the permittee shall be deemed to have established financial responsibility.

(6) The local government financial test option, including the following:

- (A) This financial test is only available for permittees that are local governments. As used in this subdivision, "local government" means a county, municipality, township, or solid waste management district.
- (B) If a permittee meets the criteria set forth in section 2(a)(6)(B) through 2(a)(6)(C) of this rule, the permittee shall be deemed to have established financial responsibility.

(C) If, at any time, the permittee fails to meet the financial test, the permittee shall establish an alternate financial responsibility mechanism within one hundred twenty (120) days after the end of the fiscal year for which the financial data required by this clause shows that the permittee no longer meets the requirements.

(D) The commissioner may disallow use of this test on the basis of qualifications in the opinion expressed in the state board of accounts' annual financial audit of the permittee. An adverse opinion or a disclaimer of opinion is cause for disallowance. Other qualifications may be cause for disallowance if, in the opinion of the commissioner, the qualifications indicate the permittee does not meet the requirements of this subdivision. The permittee shall choose an alternate financial responsibility mechanism within ninety (90) days after notification of the disallowance.

(7) The local government guarantee option. If the local government guarantor and the permittee meet the requirements of section 2(a)(7)(B) and 2(a)(7)(C) of this rule, the permittee shall be deemed to have established financial responsibility.

(b) The permittee shall choose a financial responsibility mechanism that guarantees funds will be available to meet the post-closure requirements of the solid waste land disposal facility, including the following:

- (1) Funding must equal the amount determined under:
  - (A) 329 IAC 10-23-3(c)(5) and 329 IAC 10-23-3(c)(6);
  - (B) 329 IAC 10-31-3(b)(4); or
  - (C) 329 IAC 10-38-3(b)(4).
- (2) Funding may be accomplished by initially funding the chosen financial responsibility mechanism in an amount equal to the amount determined under:
  - (A) 329 IAC 10-23-3(c)(5) and 329 IAC 10-23-3(c)(6);
  - (B) 329 IAC 10-31-3(b)(4); or
  - (C) 329 IAC 10-38-3(b)(4).
- (3) Funding may also be accomplished by making annual payments equal to the amount determined by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

Where: CE = the current post-closure cost estimate  
 CV = the current value of the trust fund  
 Y = the number of years remaining in the pay-in period

Annual funding must be no later than thirty (30) days after either each annual anniversary date of the first payment into the mechanism or the establishment of the mechanism, if no payments are required.

(c) The permittee shall submit an annual update **for inflation and for changes in the post-closure plan, which increase the costs of post-closure**, within thirty (30) days after the annual submittal date to the commissioner regarding post-closure financial assurance until final closure certification. (*Solid Waste Management Board; 329 IAC 10-39-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1922; filed Feb 26, 1999, 5:45 p.m.: 22 IR 2235; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3871*)

SECTION 99. 329 IAC 10-39-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-7 Incapacity of permittee, guarantors, or financial institutions**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 7. (a) A permittee shall notify the commissioner by certified mail within ten (10) days after commencement of a voluntary or involuntary proceeding under bankruptcy under 11 U.S.C. 101 et seq., October 1, 1979, naming the permittee as debtor.

(b) A local government guarantor, which provides financial assurance to a permittee, shall notify the permittee and the commissioner by certified mail within ten (10) days after commencement of a voluntary or involuntary proceeding under bankruptcy under 11 U.S.C. 101 et seq., October 1, 1979, naming the local government guarantor as debtor.

(c) A permittee who fulfills the requirements of sections 1 through 5 of this rule by obtaining a trust fund, surety bond, letter of credit, insurance policy, or local government guarantee ~~with~~ shall be deemed to be without the required financial responsibility in the event of bankruptcy of the:

- (1) trustee;
- (2) institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments; or
- (3) local government guarantor.

The permittee shall establish other financial responsibility within sixty (60) days after such an event. (*Solid Waste Management Board; 329 IAC 10-39-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1924; filed Feb 26, 1999, 5:45 p.m.: 22 IR 2236*)

SECTION 100. 329 IAC 10-39-9 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-9 Release of funds**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 36-9-30

Sec. 9. (a) This section applies to all permittees funding financial responsibility mechanisms under this rule whether utilizing the entire facility standard (section 2(b)(3)(A) of this rule) or the incremental standard (section 2(b)(3)(B) of this rule).

(b) Permittees may request release of closure or post-closure financial responsibility funds as follows:

- (1) Closure as follows:
  - (A) Prior to closure of the solid waste land disposal facility, if payments have been made by the permittee as a part of establishing a financial responsibility mechanism, and if the payments total

more than the required amount, the permittee may request, and the commissioner shall release the excess amount provided no refund must be made for an amount less than two thousand five hundred dollars (\$2,500). Such request for release must be made no more than once a year.

(B) After beginning final closure, a permittee or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the commissioner for a minimum of ten thousand dollars (\$10,000), **except after final closure certification approval**. However, the permittee must provide maps indicating the closure work that has been completed, and after expenditures for closures have been reimbursed, the remaining amount in the fund must be an adequate amount to complete the remainder of the closure work as required by the closure plan.

(2) Post-closure as follows:

(A) Prior to closure of the solid waste land disposal facility, if payments have been made by the permittee as a part of establishing a financial responsibility mechanism and if the payments total more than the required amount, the permittee may request, and the commissioner shall release the excess amount provided no refund must be made for an amount less than two thousand five hundred dollars (\$2,500). Such request for release must be made no more than once a year.

(B) During the period of post-closure care, the commissioner may approve a release of funds by an amount of not less than two thousand five hundred dollars (\$2,500) and not more than ~~ten~~ **three percent (3%)** of the current balance of the trust fund, **except after final post-closure certification approval**, if the permittee demonstrates to the commissioner that the value of the trust fund exceeds the remaining cost of post-closure care. Provided, however, that at no time must the value of the trust fund be allowed to drop below the remaining cost of post-closure care. Such requests for release must be made no more than once a year.

(c) Within thirty (30) days after receipt of a request for release of funds under subsection (b), the commissioner shall determine whether the expenditures are justified and, if so, shall instruct the trustee to make reimbursement in such amounts as the commissioner specifies in writing. If the commissioner determines that the cost of the closure or post-closure will be significantly greater than the value of the trust fund, the commissioner may withhold reimbursement of such amounts as deemed prudent until it is determined that the permittee is no longer required to maintain the financial responsibility. (*Solid Waste Management Board; 329 IAC 10-39-9; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1924; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3873*)

SECTION 101. 329 IAC 10-39-10 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-39-10 Financial assurance for corrective action for municipal solid waste landfills**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3  
**Affected:** IC 13-20; IC 36-9-30

Sec. 10. (a) The owner, operator, or permittee of each MSWLF required to undertake a corrective action program ~~under 329 IAC 10-21-13~~ **for ground water impacts**, shall establish financial assurance for the most recent corrective action program. The owner, operator, or permittee shall choose from the following options:

- (1) The trust fund option, including the following:
  - (A) The owner, operator, or permittee shall demonstrate financial assurance for corrective action by obtaining a trust fund on forms

provided by the commissioner or in such other form as approved by the commissioner.

(B) All trust funds must conform to the requirements detailed in section 2(a)(1)(B) of this rule, with the exception that the term "corrective action" be substituted for the term "closure".

(2) The surety bond option, including the following:

(A) The owner, operator, or permittee shall demonstrate financial assurance for corrective action by obtaining a surety bond on forms provided by the commissioner or in such other form as approved by the commissioner.

(B) All surety bonds must conform to the requirements detailed in section 2(a)(2)(B) through 2(a)(2)(E) of this rule, with the exception that the term "corrective action" be substituted for the term "closure".

(3) The letter of credit option, including the following:

(A) The owner, operator, or permittee shall demonstrate financial assurance for corrective action by obtaining a letter of credit on forms provided by the commissioner or in such other form as approved by the commissioner.

(B) All letters of credit must conform to the requirements detailed in section 2(a)(3)(B) through 2(a)(3)(D) of this rule, with the exception that the term "corrective action" be substituted for the term "closure".

(4) The local government financial test option, including the following:

(A) This financial test is only available for owners, operators, or permittees that are local governments. As used in this subdivision, "local government" means a county, municipality, township, or solid waste management district.

(B) If an owner, operator, or permittee meets the criteria set forth in section 2(a)(6)(B) through 2(a)(6)(C) of this rule, the owner, operator, or permittee shall be deemed to have established financial responsibility.

(C) If, at any time, the owner, operator, or permittee fails to meet the financial test, the owner, operator, or permittee shall establish an alternate financial responsibility mechanism within one hundred twenty (120) days after the end of the fiscal year for which the financial data required by this clause shows that the owner, operator, or permittee no longer meets the requirements.

(D) The commissioner may disallow use of this test on the basis of qualifications in the opinion expressed in the state board of accounts' annual financial audit of the owner, operator, or permittee. An adverse opinion or a disclaimer of opinion is cause for disallowance. Other qualifications may be cause for disallowance if, in the opinion of the commissioner, the qualifications indicate the owner, operator, or permittee does not meet the requirements of this subdivision. The owner, operator, or permittee shall choose an alternate financial responsibility mechanism within ninety (90) days after notification of the disallowance.

(5) The local government guarantee option. If the local government guarantor and the owner, operator, or permittee meet the requirements of section 2(a)(7)(B) and 2(a)(7)(C) of this rule, the owner, operator, or permittee shall be deemed to have established financial responsibility.

(b) The owner, operator, or permittee of an MSWLF shall choose a financial responsibility mechanism that guarantees funds will be available to meet the corrective action requirements under 329 IAC 10-21-13. The owner, operator, or permittee shall provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with 329 IAC 10-21-13 and shall include the following, as applicable:

(1) Payments into the trust fund must be made annually by the owner, operator, or permittee over half of the estimated length of the corrective action program in the case of corrective action for known releases. This period is referred to as the pay-in period. For a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half (½) of the current cost estimate for corrective action divided by the number of years in the corrective action pay-in period. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{RB} - \text{CV}}{\text{Y}}$$

Where: RB = the most recent estimate of the required trust fund balance for corrective action (that is, the total costs that will be incurred during the second half of the corrective action period)  
 CV = the current value of the trust fund  
 Y = the number of years remaining in the pay-in period

The initial payment into the trust fund must be made no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.

(2) The surety bond must be effective no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.

(3) The letter of credit must be effective no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.

(4) The local government financial test must be effective no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.

(5) The local government guarantee must be effective no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with 329 IAC 10-21-13.

(c) An owner, operator, or permittee of an MSWLF required to undertake a corrective action program ~~under 329 IAC 10-21-13~~ **for ground water impacts**, shall have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required under 329 IAC 10-21-13. The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period. The owner, operator, or permittee shall notify the commissioner that the estimate has been placed in the operating record. The owner, operator, or permittee shall do the following:

(1) Annually adjust the estimate for inflation until the corrective action program is completed in accordance with 329 IAC 10-21-13.

(2) Increase the corrective action cost estimate and the amount of financial assurance provided under subsections (a) and (b) if changes in the corrective action program or MSWLF conditions increase the maximum costs of corrective action.

The owner, operator, or permittee may reduce the amount of the corrective action cost estimate and the amount of financial assurance provided under subsections (a) and (b) if the cost estimate exceeds the maximum remaining costs of corrective action. The owner, operator, or permittee shall notify the commissioner that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance has been placed in the operating record. (*Solid Waste Management Board; 329 IAC 10-39-10; filed Mar 14, 1996,*



## IC 13-14-9 Notices

5:00 p.m.: 19 IR 1925; filed Feb 26, 1999, 5:45 p.m.: 22 IR 2236; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3874)

SECTION 102. THE FOLLOWING ARE REPEALED: 329 IAC 10-2-6; 329 IAC 10-2-29; 329 IAC 10-2-33; 329 IAC 10-2-53; 329 IAC 10-2-60; 329 IAC 10-2-76; 329 IAC 10-2-127; 329 IAC 10-2-128; 329 IAC 10-2-149; 329 IAC 10-2-177; 329 IAC 10-2-203; 329 IAC 10-2-205.

### Notice of Public Hearing

Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on August 20, 2002 at 1:30 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room A, Indianapolis, Indiana the Solid Waste Management Board will hold a public hearing on proposed amendments to the solid waste management rules at 329 IAC 10.

The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed amendments. Oral statements will be heard, but for the accuracy of the record, all comments should be submitted in writing.

Additional information regarding this action may be obtained from Pam Koons, Rules, Planning, and Outreach Section, Office of Land Quality, (317) 232-8899 or (800) 451-6027 (in Indiana).

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: ADA Coordinator

Indiana Department of Environmental Management

100 North Senate Avenue

P.O. Box 6015

Indianapolis, Indiana 46206-6015

or call (317) 233-0855. TDD: (317) 232-6565. Speech and hearing impaired callers may contact IDEM via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Indiana Department of Environmental Management Central File Room, Indiana Government Center-North, 100 North Senate Avenue, Twelfth Floor, Room 1201, Indianapolis, Indiana and are open for public inspection

## TITLE 329 SOLID WASTE MANAGEMENT BOARD

### SECOND NOTICE OF COMMENT PERIOD

#01-288(SWMB)

### DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING REMOVAL OF REFERENCES TO SPECIAL WASTE AND INDUSTRIAL WASTE FROM 329 IAC 10 THROUGH 329 IAC 13

#### PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments to rules for management of solid waste to remove references to special waste and industrial waste as required by section 10 of Public Law 218-2001, and to make other changes made necessary by removal of those references. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 329 that may be affected by this rulemaking.

#### HISTORY

First Notice of Comment Period: September 1, 2001, Indiana Register (24 IR 4265).

**CITATIONS AFFECTED:** 329 IAC 10-2-1; 329 IAC 10-2-12; 329 IAC 10-2-29.5; 329 IAC 10-2-32; 329 IAC 10-2-63; 329 IAC 10-2-72.1; 329 IAC 10-2-73; 329 IAC 10-2-85; 329 IAC 10-2-99.3; 329 IAC 10-2-105.6; 329 IAC 10-2-107.6; 329 IAC 10-2-115; 329 IAC 10-2-116; 329 IAC 10-2-117; 329 IAC 10-2-129.5; 329 IAC 10-2-130; 329 IAC 10-2-135.1; 329 IAC 10-2-135.5; 329 IAC 10-2-140; 329 IAC 10-2-174; 329 IAC 10-2-175; 329 IAC 10-2-175.7; 329 IAC 10-2-179; 329 IAC 10-2-191; 327 IAC 10-2-197.1; 329 IAC 10-2-199.1; 329 IAC 10-2-201.1; 329 IAC 10-2.5; 329 IAC 10-5-1; 329 IAC 10-7.1; 329 IAC 10-7.2; 329 IAC 10-8.1; 329 IAC 10-8.2; 329 IAC 10-9-2; 329 IAC 10-9-4; 329 IAC 10-14-2; 329 IAC 10-20-14.1; 329 IAC 10-20-29; 329 IAC 10-28-21; 329 IAC 10-28-24; 329 IAC 10-36-19; 329 IAC 11-2-19.5; 329 IAC 11-2-39; 329 IAC 11-2-44; 329 IAC 11-3-2; 329 IAC 11-6-1; 329 IAC 11-7; 329 IAC 11-8-2; 329 IAC 11-8-2.5; 329 IAC 11-8-3; 329 IAC 11-9-6; 329 IAC 11-13-4; 329 IAC 11-13-6; 329 IAC 11-15-1; 329 IAC 11-19-2; 329 IAC 11-19-3; 329 IAC 11-20-1; 329 IAC 11-21-4; 329 IAC 11-21-5; 329 IAC 11-21-6; 329 IAC 11-21-7; 329 IAC 11-21-8; 329 IAC 12-8-4; 329 IAC 13-3-1.

**AUTHORITY:** IC 13-14-9; IC 13-19-3; IC 13-20; P.L. 138-2000, SECTION 10; P.L. 218-2001, SECTION 10.

#### SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

In its 2001 session, the Indiana General Assembly adopted P.L. 218-2001 that, among other things:

- (1) repeals IC 13-20-7.5 regulating disposal of industrial waste;
- (2) allows IDEM to modify a permit to prohibit processing or disposal of specific solid waste at a solid waste disposal facility or a solid waste processing facility; and
- (3) requires the Solid Waste Management Board (board) to adopt rules to remove references to special waste and industrial waste in the rules of the board.

The purposes of this rulemaking are to:

- (1) implement the requirements of P.L. 218-2001 by removing references to special waste and industrial waste wherever they occur in 329 IAC 10 through 329 IAC 13;
- (2) amend affected parts of the rules as needed to correct problems resulting from removal of references to special waste and industrial waste; and
- (3) streamline and correct the rules at 329 IAC 10 through 329 IAC 13 as needed to eliminate unnecessary, confusing, or overly burdensome requirements and to comply with IC 4-22-2-20 and the Administrative Rules Drafting Manual published by the Legislative Services Agency.

As a replacement for statutory and regulatory prohibitions or restrictions on certain solid wastes, P.L. 218-2001 repealed the industrial waste statute at IC 13-20-7.5 and added a new IC 13-19-3-8.2 that allows IDEM to modify a permit to prohibit processing or disposal of specific solid waste at a solid waste disposal facility or a solid waste processing facility. In the first notice, we solicited comment on ways to modify permits to prohibit or regulate management of specific solid wastes at solid waste disposal facilities and solid waste processing facilities. We also solicited comment on solid wastes that should or should not be prohibited from disposal, or solid wastes that should be regulated in some way in this rulemaking. No substantive comments were received on those subjects. Because the statute provides enough direction, we are not proposing new regulations to

prohibit or regulate specific solid wastes at solid waste disposal or processing facilities.

329 IAC 10-2.5-1 contains a number of definitions that apply to restricted waste sites, nonmunicipal solid waste landfills, and construction/demolition sites in 329 IAC 10-24 through 329 IAC 10-38. These definitions were carried over from 329 IAC 2, that was repealed in 1996, along with the requirements for those facilities. Many of those definitions repeated statutory definitions or definitions in 329 IAC 10-2, conflicted with statutory definitions, or were not used in the article. Only fourteen (14) definitions are necessary to the meaning of the rules for restricted waste sites, nonmunicipal solid waste landfills, and construction/demolition sites. We are proposing to repeal 329 IAC 10-2.5 and to place these fourteen (14) definitions in 329 IAC 10-2.

We are proposing to repeal the existing requirements for waste determination in 329 IAC 10-7.1 and replace them with streamlined provisions for generators to identify the contents and properties of their wastes. The waste identification provisions published today represent a consensus of IDEM staff opinions and are intended to stimulate serious discussion on the subject. We are requesting substantive comment on all aspects of this issue. We are especially looking for specific justification for opinions presented because that information will be essential in developing a rule that is easy to understand and comply with and that achieves the regulatory goal in the least restrictive manner. The version of these provisions that we present to the board at preliminary and final adoption will fully consider all comments received on this subject and may be substantially different from this draft.

The existing rules for solid waste at 329 IAC 10 through 329 IAC 13 reference the special waste rules in various ways. Removal of the special waste rules at 329 IAC 10-8.1 will require significant changes to other rules. We are proposing to repeal the special waste rules in their entirety, with the exception of the special management requirements in 329 IAC 10-8.1-12. We are also proposing to modify the remaining rules as necessary to remove all references to special waste and industrial waste and to comply with the Administrative Rules Drafting Manual while maintaining the safeguards in those rules.

We are proposing to retain the special management requirements from 329 IAC 10-8.1-12 in a new rule 8.2. This new rule would cover the following wastes:

- Wastes that generate fugitive dust or fugitive particulate matter.
- Wastes that are hot or capable of generating heat.
- Wastes containing regulated asbestos-containing materials.
- Wastes that contain PCBs.
- Waste pesticides and wastes contaminated with pesticides.

These management requirements are essential to the safe management of landfills and must be kept to ensure safe handling of these wastes.

The existing requirements for alternative daily cover at 329 IAC 10-20-14.1 require persons using alternative daily cover at a municipal solid waste landfill to comply with the special waste rules at 329 IAC 10-8.1 when they are applicable. Since the alternative daily cover rules were based on the special waste rule, removal of the special waste rule will result in significant changes to the rules for alternative daily cover. We are proposing to substitute functional criteria for the terms "Category A special waste" and "Category B special waste". We are also proposing to clarify the language and rewrite several portions to comply with the Administrative Rules Drafting Manual.

Solid waste processing facilities are currently allowed to use the insignificant facility modification process under a generic permit modification issued to all solid waste processing facilities on March 27, 2002. We are proposing to add insignificant facility modification provisions for transfer stations to 329 IAC 11. We are requesting comment on insignificant facility modifications to transfer station permits, and in particular on the following issues:

- How should "insignificant facility modification" be defined? Should additional types of modifications be included?
- Which types of modifications should be subject to seven (7) day notice and which should require the thirty (30) day evaluation?
- When should a proposed insignificant facility modification be determined to be a minor modification by the commissioner?

A provision to change 329 IAC 10-14-2 to limit weighing of vehicles to vehicles that transport solid waste to the working face of the landfill was originally proposed in LSA Document #00-185, published on September 1, 2000, at 23 IR 3221. Because P.L. 218-2001 also requires changes to that section, the change was placed in this rulemaking.

In 329 IAC 10-20-8, the reference to the special waste rule (329 IAC 10-8.1) will be removed in LSA Document #00-185 because that rulemaking will make additional changes to that section.

**SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from September 1, 2001, through November 1, 2001, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received comments from the following parties by the comment period deadline:

David A. Kelly and Jim Hall, Greater Elkhart Chamber of Commerce (GECOC)

Dan B. Magoun, Republic Services, Inc., representing the National Solid Waste Management Association (NSWMA)

Lisa Disbrow, Waste Management of Indiana, LLC (WMI)

Following is a summary of the comments received and IDEM's responses thereto:

*Comment:* The Notice can be interpreted as yet another attempt by the IDEM to regulate Special/Industrial Waste. The Legislature repealed the Special/Industrial Waste statute specifically because it was demonstrated that such waste is already adequately regulated. The commentor vehemently opposes any attempts to circumvent the Legislature's intent in adopting Public Law 218-2001. (GECOC) It is most difficult to respond to the issue of wastes that should be prohibited at municipal solid waste landfills without further guidance, direction, or draft language from IDEM to gain a better understanding of IDEM's purpose or goal in raising this issue. At a minimum, it would be anticipated and expected that if IDEM proposes additional list of prohibited solid waste from land disposal, that proper justification and documentation would first be presented and established. (NSWMA)

*Response:* P.L. 218-2001 specifically provided that IDEM "may modify a permit to prohibit the processing or disposal of specific solid waste at: (1) a solid waste disposal facility; or (2) a solid waste processing facility" (IC 13-19-3-8.2). Because this provision is a key part of the statute, we felt it was important to request comment on what wastes should be prohibited, if any, and how such prohibitions should be accomplished. No substantive comment was received on this part of the first notice. Because the statute provides adequate authority, IDEM is not proposing any rules to carry out this provision of the statute.

We do not regulate any waste without statutory authority, and we have not proposed to do so in this rulemaking. P.L. 218-2001 provides an effective framework for safe disposal of solid waste without unnecessary regulation. The purpose of this rulemaking is to comply with both the letter and the spirit of P.L. 218-2001.

*Comment:* Petroleum contaminated soils associated with and resulting from clean-up of facilities as identified in 329 IAC 10-2-135.1(a) should be added to the list of acceptable alternative daily cover materials in 329 IAC 10-20-14.1(c) if exempted under 40 CFR

261.4(b)(10) as a hazardous waste. Many permitted landfill sites in Indiana have already been provided with approvals for use of these materials for alternative daily cover. Sufficient information and data has been submitted to IDEM demonstrating their acceptability as an alternative daily cover. (NSWMA) The commentor recommends that 329 IAC 10-20-14.1(c) be amended to include petroleum contaminated soils that are exempted by 40 CFR 261.4(b)(10) as a hazardous waste. Petroleum contaminated soils should be allowed as alternative daily cover if they meet the performance standards as described in 329 IAC 10-20-14.1(b) and are permitted as an insignificant facility modification. Most landfills in the state have already been granted permits for utilizing petroleum contaminated soils as alternative daily cover. (WMI)

*Response:* We agree and propose to add petroleum contaminated soils to the list of materials that require an insignificant facility modification for use as alternative daily cover. However, 40 CFR 261.4(b)(10) excludes only petroleum contaminated soils that result from cleanup of releases from underground storage tanks under 40 CFR 280, Subpart F. We propose to also allow use of petroleum contaminated soils from other sources, provided they meet the performance standards and are not hazardous waste.

*Comment:* IDEM is encouraged to continue the use of the insignificant facility modification provision in 329 IAC 10-3-3(c). Permitted landfills have established excellent programs to review the acceptability of waste as a solid waste prior to disposal. These programs coupled with the submittal of quality information describing the potential materials usage as an alternative daily cover in an insignificant facility modification should allow IDEM to continue to utilize this rule provision and potentially broaden its application. (NSWMA)

*Response:* We agree and propose to continue use of this provision.

*Comment:* The need to provide an insignificant facility notification under 329 IAC 10-3-3(b) for usage of a listed alternative daily cover in 329 IAC 10-20-14.1(c) should be deleted. Since IDEM has established that the listed wastes are acceptable for alternative daily cover use it is not understood why a seven (7) calendar day notice before their initial usage is required. Giving notice to IDEM after a facility begins using a listed alternative daily cover that has not been utilized before should be sufficient. In addition, this would allow the facility operation to proceed smoothly and efficiently and take advantage of these waste materials, as they become available. (NSWMA) The commentor recommends that 329 IAC 10-20-14.1(f)(1) be deleted. If alternative daily cover has been approved for use under 329 IAC 10-20-14.1(c) and the facility has been granted an insignificant modification, the requirements under 329 IAC 10-3-3(b) requiring notification to IDEM should be sufficient. If a waste stream has been approved as a listed alternative daily cover under 329 IAC 10-20-14.1(c) as an insignificant modification, it is not clear why the facility would have to provide a second notification to the agency seven days prior to the first initial use of the material. (WMI)

*Response:* An insignificant facility modification under 329 IAC 10-3-3(b) requires the facility to notify IDEM no later than seven (7) days after the modification occurs. This requirement applies to all materials listed in 329 IAC 10-20-14.1(c) and is intended to make sure that a description of the modification is placed in the facility record.

In addition, 329 IAC 10-20-14.1(f)(1) requires a seven (7) day advance notice for the initial use of any alternative daily cover material. We are not proposing to remove this advance notice requirement. The advance notice allows us to schedule an inspector to visit the landfill during the initial application of an alternative daily cover at that landfill. This requirement applies to the first use of a material for alternative daily cover at a landfill. The inspector will make sure that the material meets the requirements of the rule and that the material is

being applied correctly. Although most landfills use these materials correctly, we have found it necessary to check the first use of some materials at some landfills to make sure they comply with 329 IAC 10-20-14.1. Most landfills will not need to be inspected prior to their first use of a material. We are proposing to change the seven (7) day advance notice requirement to five (5) working days and to allow telephone notification.

*Comment:* References in 329 IAC 10-20-14.1(a) and 329 IAC 10-20-14.1(b) to “special waste” and “category A special waste” and “category B special waste” need to be deleted from the rule. (NSWMA) The commentor suggests deleting “Category A special waste” and “Category B special waste” referenced in 329 IAC 10-20-14.1. Both of these references are based upon definitions that have been statutory repealed in HEA 1830. (WMI)

*Response:* This rule removes all references to special waste wherever they occur in the affected articles, as required by P.L. 218-2001. However, in 329 IAC 10-20-14.1, these terms provide key standards for alternative daily cover materials. In this case, we are proposing to substitute the functional criteria currently found in 329 IAC 10-8.1-4 for terms referring to special waste.

*Comment:* Reference in 329 IAC 10-20-14.1(a)(2) to the standard for PCB concentration of material that is greater than twenty-five (25) parts per million needs to be corrected to comply with IDEM’s recent interpretation that PCB contaminated soils cannot be used as an alternative daily cover (IDEM denial response to MacBeth Road Landfill Request for Insignificant Modification dated September 28, 2001). (NSWMA)

*Response:* The denial letter cited points out that the PCB rules at 329 IAC 4.1 prohibit the use of PCB remediation waste as alternative daily cover. We are proposing to amend the rules for alternative daily cover to be consistent with 329 IAC 4.1.

*Comment:* It is suggested that IDEM reconsider the proposed language for a generic permit modification and insignificant modification that was drafted in June 2001 to address specific prohibited solid waste from being managed at a transfer station. The listed waste in the draft language is appropriate for exclusion at a transfer station to protect the environment, personnel safety, and facility operations. If a facility wishes to manage a listed non-hazardous prohibited waste, then an insignificant facility modification provision such as 329 IAC 10-3-3(c) should be established. It is, however, imperative that a provision for insignificant modification be incorporated into the new rule as at present no allowances are provided by rule for facility changes except either a major or minor modification. (NSWMA)

*Response:* Solid waste processing facilities are currently allowed to use the insignificant facility modification process under a generic permit modification issued to all solid waste processing facilities on March 27, 2002. We are proposing to add insignificant facility modification provisions for transfer stations to 329 IAC 11.

IC 13-19-3-8.2, added by P.L. 218-2001, provides that IDEM “may modify a permit to prohibit the processing or disposal of specific solid waste at ... a solid waste processing facility”. Because this statute provides adequate authority and flexibility, we are not proposing additional rules to prohibit processing or disposal of specific wastes.

#### **SUMMARY/RESPONSE TO COMMENTS FROM LSA DOCUMENT #00-47, READOPTION OF RULES IN TITLE 329 UNDER IC 13-14-9.5**

IDEM requested public comment from March 1, 2000, through May 30, 2000, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received the following comments concerning issues relevant to this rulemaking from the following parties by that comment period deadline:

Patrick Bennett, Indiana Manufacturers Association (IMA)  
 Elizabeth L. DuSold, Eli Lilly and Company (ELC)  
 Dan B. Magoun, Republic Services, Inc. (NSWMA)  
 Richard J. Wigh, Regional Services Corporation (RSC)

Following is a summary of the comments received and IDEM's responses thereto:

*Comment:* 329 IAC 10: The waste categories in 329 IAC 10-8.1 should be deleted for those wastes disposed of in Subtitle D landfills. Any nonhazardous waste should be considered suitable for disposal in a Subtitle D landfill. (IMA)

*Response:* As required by P.L. 218-2001, 329 IAC 10-8.1 will be repealed in this rulemaking.

*Comment:* 329 IAC 10-7.1: The waste determination requirements are duplicative of other state and federal regulations. The guidance which IDEM issued regarding the implementation of these rules is overly burdensome. (ELC)

*Response:* We propose to modify the waste determination requirements found in 329 IAC 10-7.1 in this rulemaking to support the various requirements for generators found in 329 IAC 10. We are specifically requesting comment on the draft language published today.

*Comment:* 329 IAC 10-14-2(d)(4) should be deleted. Revise clause (c)(4) to read "weigh all solid waste," not "all vehicles," to provide for the common practice of diverting small loads to a convenience area. (NSWMA)(RSC)

*Response:* We propose to amend 329 IAC 10-14-2 to accomplish the purpose of this comment.

**REQUEST FOR PUBLIC COMMENTS**

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to: #01-288(SWMB)[*Removal of Special Waste and Industrial Waste*] Marjorie Samuel  
 Rules, Planning and Outreach Section  
 Office of Land Quality  
 Indiana Department of Environmental Management  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the receptionist on duty at the eleventh floor reception desk, Office of Land Quality, 100 North Senate Avenue, Eleventh Floor East, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 232-3403, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules, Planning and Outreach Section at (317) 232-1655 or (317) 232-7995.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed or hand delivered by July 31, 2002.

Additional information regarding this action may be obtained from Steve Mojonner of the Rules, Planning and Outreach Section, Office of Land Quality, (317) 233-1655 or call (800) 451-6027 (in Indiana), press zero (0), and ask for extension 3-1655.

**DRAFT RULE**

SECTION 1. 329 IAC 10-2-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-1 Definitions**

*Authority:* IC 13-14-8-7; IC 13-15; IC 13-19-3  
*Affected:* IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 1. ~~(a)~~ **The definitions in IC 13-11-2 apply throughout this article.** In addition to the definitions in IC 13-11-2, the definitions in this rule apply throughout this article. ~~to municipal solid waste landfills:~~

~~(b) In addition to the definitions in IC 13-11-2, the definitions in this rule apply to the regulation of nonmunicipal solid waste landfills, construction/demolition sites, and restricted waste sites Types I, H, HH, and IV as follows:~~

- ~~(1) 329 IAC 10-3-3;~~
- ~~(2) 329 IAC 10-4;~~
- ~~(3) 329 IAC 10-7-1 and 329 IAC 10-8-1;~~
- ~~(4) 329 IAC 10-9-3 and 329 IAC 10-9-5;~~
- ~~(5) 329 IAC 10-10 through 329 IAC 10-23;~~
- ~~(6) 329 IAC 10-39-10 and 329 IAC 10-39-11.~~

*(Solid Waste Management Board; 329 IAC 10-2-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1763; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1702, eff one hundred eighty (180) days after filing with the secretary of state; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2745, eff Jul 10, 1998; errata filed Apr 8, 1998, 2:20 p.m.: 21 IR 2990)*

SECTION 2. 329 IAC 10-2-12 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-12 "Aquifer" defined**

*Authority:* IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
*Affected:* IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 12. (a) "Aquifer" when used in conjunction with a municipal solid waste landfill, means a consolidated or unconsolidated geologic formation or group of formations or a portion of a formation, that is hydraulically interconnected and that has the ability to receive, store, or transmit water to wells, springs, or other surface water bodies.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of ground water. *(Solid Waste Management Board; 329 IAC 10-2-12; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1764)*

SECTION 3. 329 IAC 10-2-29.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-29.5 "CESQG hazardous waste" defined**

*Authority:* IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
*Affected:* IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 29.5. "CESQG hazardous waste" means hazardous waste that is:

- (1) generated by a conditionally exempt small quantity generator; and
- (2) regulated under 40 CFR 261.5, revised as of July 1, 2001, available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328.

*(Solid Waste Management Board; 329 IAC 10-2-29.5)*

SECTION 4. 329 IAC 10-2-32 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-32 "Commercial solid waste" defined**

*Authority:* IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
*Affected:* IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 32. (a) "Commercial solid waste" means all types of solid waste generated by:

- (1) retail outlets;
- (2) offices;
- (3) restaurants;
- (4) warehouses; and
- (5) other nonmanufacturing activities. ~~but excludes~~

(b) The term does not include:

- (1) household or residential waste;
- (2) hazardous waste;
- (3) infectious waste; and ~~special~~
- (4) industrial process wastes.

(Solid Waste Management Board; 329 IAC 10-2-32; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1767)

SECTION 5. 329 IAC 10-2-63 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-63 "Dwelling" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 63. (a) "Dwelling", when used in conjunction with a municipal solid waste landfill, means any building that people inhabit on a regular or seasonal basis, including, but not limited to, the following:

- (1) Home-based schools.
- (2) Residences.
- (3) Public or private hospitals with twenty (20) beds or less.
- (4) Churches.

The term does not include offices, factories, public or non-public schools, or public or private hospitals with more than twenty (20) beds.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means any building that people inhabit on a regular or seasonal basis, including the following:

- (1) Schools.
- (2) Hospitals.
- (3) Residences.
- (4) Factories.
- (5) Offices.

(Solid Waste Management Board; 329 IAC 10-2-63; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1771)

SECTION 6. 329 IAC 10-2-72.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-72.1 "Final closure" or "closure" defined**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
Affected: IC 13-11-2-17; IC 13-19-3; IC 36-9-30

Sec. 72.1. (a) "Final closure", when used in conjunction with a municipal solid waste landfill, means those activities required at the end of waste acceptance for the entire area of a facility, including the placement of final cover and the establishment of vegetation in accordance with approved closure plans but exclusive of monitoring and maintenance activities required under post-closure care.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means those activities to be completed at the end of waste acceptance at a facility, including certification required by

**329 IAC 10-30-7 and 329 IAC 10-37-7, as applicable, but not including those activities required after said certification.** (Solid Waste Management Board; 329 IAC 10-2-72.1; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2746)

SECTION 7. 329 IAC 10-2-73 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-73 "Final cover" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 73. (a) "Final cover", when used in conjunction with a municipal solid waste landfill, means any cover of a type and thickness approved by the commissioner to be placed on top of the waste upon the termination of filling in an area.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means any cover of a type, thickness, elevation, and slope approved by the commissioner for the termination of filling in an area. (Solid Waste Management Board; 329 IAC 10-2-73; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1772)

SECTION 8. 329 IAC 10-2-85 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-85 "Ground water" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 85. (a) "Ground water", when used in conjunction with a municipal solid waste landfill, means such accumulations of underground water, natural and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this state, but excluding manmade underground storage or conveyance structures.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means water below the land surface in the zone of saturation. (Solid Waste Management Board; 329 IAC 10-2-85; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1773)

SECTION 9. 329 IAC 10-2-99.3 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-99.3 "Karst topography" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 99.3. "Karst topography" means a topography formed on a carbonate rock formation and dominated by features of solutional origin. (Solid Waste Management Board; 329 IAC 10-2-99.3)

SECTION 10. 329 IAC 10-2-105.6 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-105.6 "Lift" defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 105.6. "Lift" means a layer of cells covering a designated area of a solid waste land disposal facility. (Solid Waste Management Board; 329 IAC 10-2-105.6)

SECTION 11. 329 IAC 10-2-107.6 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-107.6 “Locally useful aquifer” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 107.6. “Locally useful aquifer” means an aquifer, which, based on productivity, quality, depth, and alternate sources available, is a source or a probable source of water for any user or potential user within one (1) mile of a particular location. (*Solid Waste Management Board; 329 IAC 10-2-107.6*)

SECTION 12. 329 IAC 10-2-115 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-115 “Municipal solid waste” or “MSW” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 13-19-3-3; IC 36-9-30

Sec. 115. (a) “Municipal solid waste” or “MSW” means any solid waste generated by community activities or the operation of residential or commercial establishments.

(b) The term includes the following:

- (1) Household or residential waste.
- (2) Commercial solid waste.

(c) The term does not include the following:

- (1) Construction/demolition waste.
- (2) special Industrial process waste. as defined in section 179 of this rule;
- (3) Infectious waste. as defined in section 96 of this rule.
- (4) waste that:
  - (A) results from the combustion of Coal and
  - (B) is referenced under IC 13-1-12-9 combustion and flue gas desulfurization wastes excluded from regulation by IC 13-19-3-3.
- (5) Hazardous waste.
- (6) Pollution control waste.

(*Solid Waste Management Board; 329 IAC 10-2-115; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1777*)

SECTION 13. 329 IAC 10-2-116 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-116 “Municipal solid waste landfill” or “MSWLF” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 116. (a) “Municipal solid waste landfill” or “MSWLF” means a solid waste land disposal facility that is:

- (1) permitted to receive accept municipal solid waste; and that is
- (2) not:
  - (A) a land application unit;
  - (B) a surface impoundment;
  - (C) an injection well; or
  - (D) a waste pile.

(b) An MSWLF is a sanitary landfill for purposes of IC 13-20-21. An MSWLF also may receive commercial solid waste, construction/demolition waste, small quantity generator waste, industrial solid waste, and special waste in accordance with 329 IAC 10-8-1. Such a landfill may be publicly or privately owned. (*Solid Waste Management*

*Board; 329 IAC 10-2-116; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1777; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1703, eff one hundred eighty (180) days after filing with the secretary of state; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2747, eff Jul 10, 1998; errata filed Apr 8, 1998, 2:20 p.m.: 21 IR 2990; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3767*)

SECTION 14. 329 IAC 10-2-117 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-117 “Municipal solid waste landfill unit” or “MSWLF unit” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 117. (a) “Municipal solid waste landfill unit” or “MSWLF unit” means a discrete area of land or an excavation that is:

- (1) permitted to receive accept municipal solid waste for disposal; and that is
- (2) not:
  - (A) a land application unit;
  - (B) a surface impoundment;
  - (C) an injection well; or
  - (D) a waste pile.

as those terms are defined in 40 CFR 257.2.

An MSWLF also may receive commercial solid waste, construction/demolition waste, small quantity generator waste, industrial solid waste, and special waste in accordance with 329 IAC 10-8-1. (b) The landfill may be publicly or privately owned. An MSWLF unit may be a new MSWLF unit, an existing MSWLF unit, or a lateral expansion. (*Solid Waste Management Board; 329 IAC 10-2-117; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1777; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1703, eff one hundred eighty (180) days after filing with the secretary of state; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2747, eff Jul 10, 1998; errata filed Apr 8, 1998, 2:20 p.m.: 21 IR 2990; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3767*)

SECTION 15. 329 IAC 10-2-129.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 10-2-129.5 “Operating personnel” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 129.5. “Operating personnel” means persons necessary to properly operate a solid waste land disposal or processing facility. (*Solid Waste Management Board; 329 IAC 10-2-129.5*)

SECTION 16. 329 IAC 10-2-130 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-130 “Operator” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1; IC 13-20-4-7; IC 13-20-6  
 Affected: IC 13-11-2-148; IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 130. (a) “Operator”, except as provided in subsection (b), means the person or persons responsible for the overall operation of a solid waste land disposal facility or part of a solid waste land disposal facility.

(b) In:

- (1) 329 IAC 10-20-30;
- (2) 329 IAC 10-28-22 through 329 IAC 10-28-24; and
- (3) 329 IAC 10-36-17 through 329 IAC 10-36-19;

the term has the meaning as set forth in IC 13-11-2-148(c). (*Solid*

## IC 13-14-9 Notices

Waste Management Board; 329 IAC 10-2-130; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1779; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3767)

SECTION 17. 329 IAC 10-2-135.5 IS ADDED TO READ AS FOLLOWS:

### 329 IAC 10-2-135.5 "Petroleum contaminated soil" defined

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-12; IC 13-19; IC 13-20-7-6; IC 36-9-30

Sec. 135.5. "Petroleum contaminated soil" means soil that is contaminated with any of the following:

- (1) Asphalt or asphaltic suspension.
- (2) Aviation turbine fuel.
- (3) Crude oil.
- (4) Diesel fuel.
- (5) Fuel oil.
- (6) Gas oil.
- (7) Gasoline.
- (8) Heating oil.
- (9) Hydraulic oil.
- (10) Jet fuel.
- (11) Kerosene.
- (12) Lubricating oil.
- (13) Mineral spirits.
- (14) Motor fuel.
- (15) Transformer oil.
- (16) Transmission fluid.

(Solid Waste Management Board; 329 IAC 10-2-135.5)

SECTION 18. 329 IAC 10-2-140 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-140 "Post-closure cost estimate" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 140. (a) "Post-closure cost estimate", when used in conjunction with a municipal solid waste landfill, means the original or most recently submitted written estimate, in current dollars, of the total cost of post-closure monitoring and maintenance of the solid waste land disposal facility during the entire post-closure care period in accordance with the post-closure plan.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means the original written estimate, in current dollars, of the total cost of post-closure monitoring and maintenance of the solid waste land disposal facility during the entire post-closure care period in accordance with the post-closure plan. (Solid Waste Management Board; 329 IAC 10-2-140; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1780; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3768)

SECTION 19. 329 IAC 10-2-174 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-174 "Solid waste" defined

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3

Affected: IC 13-11-2-17; IC 13-11-2-205; IC 13-19-3; IC 13-20-10; IC 36-9-30

Sec. 174. (a) "Solid waste" means any: has the meaning as set forth in IC 13-11-2-205.

- (+) garbage;
- (2) refuse;

- (3) sludge from a wastewater treatment plant;
- (4) sludge from a water supply treatment plant;
- (5) sludge from an air pollution control facility; or
- (6) Other discarded material, including:

(b) The following are examples of other discarded material:

- (A) (1) Ash residue.
- (B) (2) Contaminated sediments.
- (C) (3) Commercial solid waste.
- (D) (4) Construction/demolition waste.
- (E) (5) Hazardous waste.
- (F) (6) Household waste.
- (G) (7) Infectious waste.
- (H) (8) Liquid waste.
- (I) special (9) Pollution control waste.
- (J) (10) Municipal solid waste.
- (K) (11) Regulated hazardous waste.
- (L) (12) Residential and nonresidential waste. and
- (M) Any solid, liquid, semisolid, or contained gaseous material:
- (13) Industrial process waste.

(b) The term does not include:

- (1) solid or dissolved material in domestic sewage or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under Section 402 of the federal Water Pollution Control Act, 33 U.S.C. 1342, as amended February 4, 1987;
- (2) source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, 42 U.S.C. 2014 et seq., as amended October 24, 1992;
- (3) manures or crop residues returned to the soil at the point of generation as fertilizers or soil conditioners as part of a total farm operation; or
- (4) vegetative matter at composting facilities registered under IC 13-20-10.

(Solid Waste Management Board; 329 IAC 10-2-174; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1784; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2748)

SECTION 20. 329 IAC 10-2-175 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-2-175 "Solid waste boundary" defined

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

Affected: IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 175. (a) "Solid waste boundary", when used in conjunction with a municipal solid waste landfill, means the outermost perimeter of the area within a solid waste land disposal facility that is permitted to receive accept solid waste for disposal.

(b) The term, when used in conjunction with a nonmunicipal solid waste landfill, a construction/demolition site, or a restricted waste site, means the outermost perimeter of the solid waste fill area, as it would exist at the time of closure, as projected in the facility's closure plan. (Solid Waste Management Board; 329 IAC 10-2-175; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1785)

SECTION 21. 329 IAC 10-2-175.7 IS ADDED TO READ AS FOLLOWS:

### 329 IAC 10-2-175.7 "Solid waste facility" or "facility" defined

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-12; IC 13-19; IC 13-20-7-6; IC 36-9-30

**Sec. 175.7. "Solid waste facility" or "facility" means a solid waste land disposal facility.** (*Solid Waste Management Board; 329 IAC 10-2-175.7*)

SECTION 22. 329 IAC 10-2-191 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-191 "Twenty-five year, twenty-four hour precipitation event" or "twenty-five year precipitation event" defined**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-30-2; IC 13-19-3; IC 36-9-30

Sec. 191. "Twenty-five (25) year, twenty-four (24) hour precipitation event" or "**twenty-five (25) year precipitation event**" means the maximum twenty-four (24) hour precipitation event with the probable recurrence interval of once in twenty-five (25) years as determined in the following:

- (1) "Rainfall Frequency Atlas of the United States for Duration from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years", Technical Paper 40, Weather Bureau, United States Department of Commerce.
  - (2) "Rainfall Frequency for Indiana", Indiana department of natural resources, division of water, November 1994.
- (*Solid Waste Management Board; 329 IAC 10-2-191; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1787*)

SECTION 23. 329 IAC 10-2-197.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-2-197.1 "U.S. Environmental Protection Agency Publication SW-846" or "SW-846" defined**

**Authority:** IC 13-14-8-7; IC 13-15-2; IC 13-19  
**Affected:** IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 197.1. "U.S. Environmental Protection Agency Publication SW-846" or "SW-846" means "Test Methods for Evaluating Solid Waste, Physical Chemical Methods", U.S. Environmental Protection Agency Publication SW-846, Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), and III (December 1996), that is incorporated by reference at 329 IAC 10-7-1-2(a)(1); and IIIA (April 1998). SW-846 is available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328. (*Solid Waste Management Board; 329 IAC 10-2-197.1; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1705, eff one hundred eighty (180) days after filing with the secretary of state*)

SECTION 24. 329 IAC 10-5-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-5-1 Applicability**

**Authority:** IC 13-14-8-7; IC 13-15; IC 13-19-3-1  
**Affected:** IC 13-19-3; IC 13-25-4; IC 36-9-30

- Sec. 1. (a) This rule applies to all industries:
- (1) that dispose of solid waste including special waste on the site where the waste is generated or off-site at a solid waste land disposal facility that is owned and operated by the generator for its exclusive use; and
  - (2) that are required to have a permit under this article, but did not have a permit under:
    - (A) 329 IAC 1.5, which was repealed in 1989; or
    - (B) 329 IAC 2, which was repealed in 1996.

(b) To continue on-site disposal after September 1, 1989, industries subject to this rule and operating before September 1, 1989, must have submitted all information required by section 2 of this section rule on or before September 1, 1989, to the commissioner. Compliance with section 2 of this rule must constitute an interim permit and must allow the facility to continue operating until such time as the commissioner issues or denies a permit under section 3 of this rule.

(c) This rule does not preclude the commissioner from taking action under IC 13-25-4 where a particular disposal practice is demonstrated to threaten human health or the environment. (*Solid Waste Management Board; 329 IAC 10-5-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1797; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045; filed Mar 19, 1998, 11:07 a.m.: 21 IR 2750; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3778; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 25. 329 IAC 10-7.2 IS ADDED TO READ AS FOLLOWS:

**Rule 7.2. Generator Responsibilities for Waste Identification**

**329 IAC 10-7.2-1 Generator responsibilities**

**Authority:** IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1  
**Affected:** IC 13-12; IC 13-19; IC 13-30-2-1

**Sec. 1. (a) A generator of solid waste is responsible for identifying the contents and properties of each waste generated for purposes of the following:**

- (1) Managing each waste in a way that does not violate IC 13-30-2-1 or 329 IAC 10-4-2.
- (2) Managing each waste in accordance with the following:
  - (A) 329 IAC 10.
  - (B) 329 IAC 11.
  - (C) 329 IAC 15.
- (3) If applicable, managing and disposing of each waste in compliance with the following:
  - (A) 329 IAC 3.1\*.
  - (B) 329 IAC 4.1.

(b) A generator may use any of the following to identify the contents and properties of the waste:

- (1) Generator knowledge as defined in 329 IAC 10-2-78.1.
- (2) Waste testing in accordance with section 2 of this rule.

(c) A generator shall do all of the following:

- (1) Maintain the records used to comply with this section to the extent necessary to support all decisions regarding that waste.
- (2) Make the information used to comply with this section available to the commissioner upon request.
- (3) Allow the commissioner to review any information, decisions, and activities regarding that waste.

This subsection does not require a generator to create records in addition to those necessary to comply with this section.

\*The waste determination requirements in 40 CFR 262.11 apply to each person who generates a solid waste as described in 40 CFR 261.2, 40 CFR 261.2 and 40 CFR 262.11, revised as of July 1, 2001, are incorporated by reference at 329 IAC 3.1-6 and 329 IAC 3.1-7, respectively. 40 CFR 261.2 and 40 CFR 262.11, revised as of July 1, 2001, are available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328. (*Solid Waste Management Board; 329 IAC 10-7.2-1*)



**329 IAC 10-7.2-2 Waste testing**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
 Affected: IC 13-12; IC 13-19; IC 36-9-30

Sec. 2. (a) When testing is used to identify the contents and properties of a solid waste the generator shall do the following:

- (1) Use methods from one (1) of the following:
  - (A) U.S. Environmental Protection Agency SW-846.
  - (B) Equivalent methods approved by the commissioner.
- (2) Comply with the applicable quality assurance and quality control procedures in U.S. Environmental Protection Agency publication SW-846, Chapter 1, "Quality Control".
- (3) Comply with the statistical sampling methodology specified in Volume II, Chapter 9, "Sampling Plan" of U.S. Environmental Protection Agency publication SW-846 to determine the upper confidence limit for each constituent concentration value.

(b) Wastes must not be combined for testing.

(c) Testing to identify the contents and properties of the solid waste may include, but not be limited to, the following:

- (1) Metals not regulated by the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq.
- (2) Chlorides.
- (3) Sulfides.
- (4) Phenols.
- (5) Other contaminants or characteristics that present a risk to human health or the environment.

(d) For testing required to determine a restricted waste site type under 329 IAC 10-9-4 use Table 1.

**Table 1. Testing Requirements for Waste to be Disposed of in a Restricted Waste Site**

Waste	Use These Extraction Methods <sup>1</sup>	Analyze for These Constituents <sup>2</sup>
Coal Ash or Flue Gas Desulfurization By-products	Method 1311 (Toxicity Characteristic Leaching Procedure) Neutral Leaching Method <sup>3</sup> or Method 1312 (Synthetic Precipitation Leaching Procedure)	Arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver Barium, chlorides, total cyanide, fluoride, sodium, sulfate, total sulfide, total dissolved solids
Foundry Waste	Method 1311 (Toxicity Characteristic Leaching Procedure) Neutral Leaching Method <sup>3</sup> or Method 1312 (Synthetic Precipitation Leaching Procedure)	Arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver Chlorides, copper, total cyanide, fluoride, iron, manganese, nickel, pH, phenols, sodium, sulfate, total sulfide, total dissolved solids, zinc
All Other Waste	Test methods from SW-846 specific to the waste	Constituents will be determined based on the specific waste

<sup>1</sup>Extraction methods and procedures are found in U.S. Environmental Protection Agency Publication SW-846 unless otherwise noted.

<sup>2</sup>Use appropriate analytical methods from SW-846, "Methods for Chemical Analysis of Water and Waste," EPA-600/4-79-020, revised March 1983, or use other equivalent analytical methods

approved by the commissioner. EPA-600/4-79-020 is available from the National Technical Information Service, Springfield, Virginia 22161, order number PB84-128677.

<sup>3</sup>The Neutral Leaching Method is conducted as follows:

- (1) Use Method 1311, Toxicity Characteristic Leaching Procedure, described in U.S. Environmental Protection Agency publication SW-846.
- (2) Substitute deionized water for extraction fluids 1 and 2 described in Method 1311.
- (3) Analyze for pH at the end of the eighteen (18) hour extraction period.

(Solid Waste Management Board; 329 IAC 10-7.2-2)

SECTION 26. 329 IAC 10-8.2 IS ADDED TO READ AS FOLLOWS:

**Rule 8.2. Management Requirements for Certain Solid Wastes**

**329 IAC 10-8.2-1 General**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1  
 Affected: IC 13-11-2-155; IC 13-12; IC 13-19; IC 13-20-7-6

Sec. 1. This rule describes certain solid waste that must be managed using the handling or disposal requirements described in this section. (Solid Waste Management Board; 329 IAC 10-8.2-1)

**329 IAC 10-8.2-2 Wastes that generate fugitive dust**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1  
 Affected: IC 13-11-2-155; IC 13-12; IC 13-18-1; IC 13-19; IC 13-20-7-6

Sec. 2. Waste that generates fugitive dusts or fugitive particulate matter must be managed in a way that does not violate any of the following:

- (1) The rules of the air pollution control board at 326 IAC 6-4 for fugitive dust.
- (2) The rules of the air pollution control board at 326 IAC 6-5 for fugitive particulate matter, including 326 IAC 6-5-4(g) for control measures for solid waste handling.

(Solid Waste Management Board; 329 IAC 10-8.2-2)

**329 IAC 10-8.2-3 Waste that is hot or capable of generating heat**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1  
 Affected: IC 13-11-2-155; IC 13-12; IC 13-19; IC 13-20-7-6

Sec. 3. (a) Waste that is hot, or capable of generating heat in combination with other wastes or water, such that the heat may adversely affect:

- (1) routine solid waste disposal operations;
- (2) the structure of the MSWLF unit or non-MSWLF unit; or
- (3) human health;

must be managed in accordance with this section, as applicable.

(b) The waste must be cooled or allowed to cool to a temperature that will not adversely affect:

- (1) routine solid waste disposal operations;
- (2) the structure of the MSWLF unit or non-MSWLF unit; or
- (3) human health;

prior to shipment for disposal.

(c) The waste must be treated to prevent any exothermic reaction if such contact may adversely affect:

- (1) routine solid waste disposal operations;
- (2) the structure of the MSWLF unit or non-MSWLF unit; or
- (3) human health.

(d) The waste must be isolated to prevent contact with another waste or with water if such contact may adversely affect:

- (1) routine solid waste disposal operations;
- (2) the structure of the MSWLF unit or non-MSWLF unit; or
- (3) human health.

(Solid Waste Management Board; 329 IAC 10-8.2-3)

**329 IAC 10-8.2-4 Regulated asbestos-containing materials**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1

Affected: IC 13-11-2-155; IC 13-12; IC 13-19; IC 13-20-7-6

Sec. 4. (a) Regulated asbestos-containing materials, except for Category II nonfriable asbestos-containing materials regulated under subsection (b), must be managed in accordance with the rules of the air pollution control board at 326 IAC 14-10, 40 CFR 61, Subpart M, revised as of February 12, 1999, and the following:

- (1) The generator shall provide the solid waste land disposal facility with sufficient notice in advance of the disposal such that the facility may prepare to accept the regulated asbestos-containing material.
- (2) All regulated asbestos-containing material must be handled in accordance with the wetting, packaging, and labeling provisions of 40 CFR 61.145(c), revised as of January 16, 1991, and 40 CFR 61.150(a), revised as of January 16, 1991.
- (3) Each load of regulated asbestos-containing material must be accompanied by a waste shipment record prepared on one (1) of the following:

- (A) A form provided by the department.
- (B) A form produced by the generator that includes all the information included on the form provided by the department.

(4) All regulated asbestos-containing material must be disposed of in accordance with the provisions of the following:

- (A) 40 CFR 61.154, revised as of January 16, 1991.
- (B) 326 IAC 14-10.
- (C) The following:

- (i) There must not be direct physical contact between regulated asbestos-containing material and heavy equipment during disposal and covering operations.
- (ii) All regulated asbestos-containing material must be covered with soil, approved alternative material, or solid waste before compaction with heavy equipment or within twenty-four (24) hours of receipt of the waste to prevent airborne release.
- (iii) Any regulated asbestos-containing material that is improperly packaged or in which packaging has been damaged must be placed in the working face of the MSWLF unit or non-MSWLF unit and covered immediately after placement of the waste.
- (iv) An asbestos waste disposal manager shall be present at the MSWLF unit or non-MSWLF unit during all handling and disposal of regulated asbestos-containing material to ensure compliance with this subsection. The asbestos waste disposal manager shall be licensed in accordance with the rules of the air pollution control board at 326 IAC 18-1.
- (v) All personnel involved in off-loading or in covering shall use appropriate personal protective equipment as necessary to prevent exposure to any airborne release of asbestos fibers during disposal operations.
- (vi) The solid waste land disposal facility must have a written contingency plan to safely control torn and broken containers. Dedicated equipment and supplies must be maintained at the facility to properly handle spilled or improperly

packaged or wetted regulated asbestos-containing material. If release of asbestos-containing waste materials occurs, the solid waste land disposal facility must take immediate corrective action directed by the asbestos waste disposal manager.

(b) Category II nonfriable asbestos-containing material, as defined in 40 CFR 61.141, revised as of June 19, 1995, that has not been made friable by forces reasonably expected to act on the material before disposal must be managed in accordance with the following:

- (1) Subsection (a)(1).
- (2) Subsection (a)(3).
- (3) Subsection (a)(4).
- (4) Label the containers or wrapped materials using warning labels that meet the requirements of 29 CFR 1910.1001(j)(4), revised as of January 8, 1998, and include the information in the following figure:

<p><b>DANGER</b>  <b>CONTAINS ASBESTOS FIBERS</b>  <b>AVOID CREATING DUST</b>  <b>CANCER AND LUNG DISEASE HAZARD</b></p>
--

(5) For asbestos-containing waste material to be transported off the facility site, label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated.

(c) 29 CFR 1910 and 40 CFR 61 are available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328. (Solid Waste Management Board; 329 IAC 10-8.2-4)

**329 IAC 10-8.2-5 Wastes that contain PCBs**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1

Affected: IC 13-11-2-155; IC 13-12; IC 13-19; IC 13-20-7-6

Sec. 5. Wastes that contain PCBs must be managed and disposed of in accordance with 329 IAC 4.1. (Solid Waste Management Board; 329 IAC 10-8.2-5)

**329 IAC 10-8.2-6 Waste pesticides or wastes contaminated with pesticides**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3-1

Affected: IC 13-11-2-155; IC 13-12; IC 13-19; IC 13-20-7-6; IC 15-3-3.5-34

Sec. 6. Waste pesticides or wastes contaminated with pesticides must be disposed of in accordance with:

- (1) the label required by 40 CFR 156.10(a), revised as of February 23, 1998, available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328; and
- (2) IC 15-3-3.5-34.

(Solid Waste Management Board; 329 IAC 10-8.2-6)

SECTION 27. 329 IAC 10-9-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-9-2 Municipal solid waste landfill waste criteria**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 2. A municipal solid waste landfill may accept all solid waste regulated under this article except the following:

# IC 13-14-9 Notices

- (1) Municipal solid waste.
- (2) Construction/demolition waste.
- (3) CESQG hazardous waste.
- (4) Industrial process waste.

**(b) A municipal solid waste landfill may not accept the following:**

- (1) ~~Special Solid waste must be accepted at a municipal solid waste landfill only in accordance with 329 IAC 10-8.1; that is prohibited by the facility permit.~~
- (2) Waste that is or that contains free liquids ~~must not be accepted for disposal by any municipal solid waste landfill effective September 1, 1989. Free liquid shall be determined utilizing Method 9095 Paint Filter Liquids Test, as described in U.S. Environmental Protection Agency Publication SW-846. This prohibition must does not apply to those liquids allowed in 329 IAC 10-20-27.~~

*(Solid Waste Management Board; 329 IAC 10-9-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1805; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1725, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 28. 329 IAC 10-9-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-9-4 Restricted waste sites waste criteria**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 4. (a) A restricted waste site must accept only the restricted waste types specified in the facility permit, determined according to the classification criteria in this section.

(b) Restricted wastes accepted at a restricted waste site must be limited to one (1) waste type or related waste types that are as follows:

- (1) Expected to have similar chemical and physical composition.
- (2) Demonstrated to be within the concentration limits for the appropriate site type for each constituent for which testing is required. The concentration limits for each constituent for each **restricted waste** site type are as follows:

(A) **Table 1 lists the maximum levels** for constituents using **Method 1311**, the toxicity characteristic leaching procedure test as defined in ~~329 IAC 10-7.1~~ described in U.S. Environmental Protection Agency Publication SW-846:

Table 1. Constituents Using the **Method 1311**, Toxicity Characteristic Leaching Procedure Test

Constituent	Concentration (milligrams per liter)			
	Type IV	Type III	Type II	Type I
Arsenic	≤ <del>0.05</del> ≤ <b>0.05</b>	≤.50	≤1.3	≤ <del>5.0</del> ≤ <b>5.0</b>
Barium	≤1.0	≤10.	≤25.	<100.
Cadmium	≤.01	≤.10	≤.25	<1.0
Chromium	≤.05	≤.50	≤1.3	<5.0
Lead	≤.05	≤.50	≤1.3	<5.0
Mercury	≤.002	≤.02	≤.05	<.20
Selenium	≤.01	≤.10	≤.25	<1.0
Silver	≤.05	≤.50	≤1.3	<5.0

(B) **Table 2 lists the maximum levels** for constituents using the **neutral** leaching method test:

Table 2. Constituents Using the **Neutral** Leaching Method Test <sup>1</sup>

Constituent	Concentration (milligrams per liter)			
	Type IV	Type III	Type II	Type I
Barium	≤1.0	≤10.0	≤25.	*** (2)
Chlorides	≤250.	≤2,500.	≤6,300.	*** (2)

Copper	≤.25	≤2.5	≤6.3	*** (2)
Cyanide, total	≤.20	≤2.0	≤5.0	*** (2)
Fluoride	≤1.4	≤14.0	≤35.	*** (2)
Iron	≤1.5	≤15.0	*** (2)	*** (2)
Manganese	≤.05	≤.50	*** (2)	*** (2)
Nickel	≤.20	≤2.0	≤5.0	*** (2)
Phenols	≤.30	≤3.0	≤7.5	*** (2)
Sodium	≤250.	≤2,500.	≤6,300.	*** (2)
Sulfate	≤250.	≤2,500.	≤6,300.	*** (2)
Sulfide, total	≤1.0*** ≤1.0 <sup>3</sup>	≤5.0	≤13.	*** (2)
Total dissolved solids	≤500.	≤5,000.	≤12,500.	*** (2)
Zinc	≤2.5	≤25.	≤63.	*** (2)

<sup>1</sup>The Neutral Leaching Method test is conducted as follows:

- (1) Use Method 1311, Toxicity Characteristic Leaching Procedure, described in U.S. Environmental Protection Agency publication SW-846.
- (2) Substitute deionized water for extraction fluids 1 and 2 described in Method 1311.
- (3) Analyze for pH at the end of the eighteen (18) hour extraction period.

<sup>2</sup>Testing is not required.

<sup>3</sup>If detection limit problems exist, please consult the Office of Land Quality for guidance.

(C) For Table 3 lists the maximum pH:

Constituent	Acceptable Range (Standard Units)			
	Type IV	Type III	Type II	Type I
pH	6.0-9.0	5.0-10.0	4.0-11.0	*** (1)

\* ≤ means less than or equal to:

\*\* < means less than:

\*\*\* <sup>1</sup>Testing is not required.

\*\*\*\* If detection limit problems exist, please consult the Office of Solid and Hazardous Waste for guidance:

(c) The following apply to those wastes that have previously been classified using the **Method 1310**, extraction procedure toxicity test, described in U.S. Environmental Protection Agency Publication SW-846, under 329 IAC 2, which was repealed in 1996, and now must be classified using the **toxicity characteristic leaching procedure Method 1311** under this article:

(A) (1) The waste must be classified as under ~~329 IAC 10-7.1~~ **329 IAC 10-7.2** at the renewal of the current waste classification.

(B) (2) If the results using the **toxicity characteristic leaching procedure Method 1311** demonstrate a higher concentration of contaminants leaching from the waste than demonstrated using the **extraction procedure toxicity test Method 1310** for the previous waste classification such that the waste now requires a restricted waste site type with more environmentally protective design and operating standards, the facility accepting the waste is subject to the following:

(i) (A) For units undergoing closure, the facility must comply with the ground water monitoring and post-closure requirements of the more environmentally protective restricted waste site type.

(ii) (B) Within one (1) year from the date that the new waste classification type is determined, the owner or operator shall:

(AA) (i) submit an application to reclassify the facility to the restricted waste site type with the more environmentally protective standards; or

(BB) (ii) close the facility as required under item (i).

(iii) (C) If the facility is comprised of previously closed units that are contiguous with existing or new units, the new and existing units must comply with item (ii) and the entire facility must comply with the ground water monitoring requirements of the more environmentally protective restricted waste site type.

(e) (d) Coal combustion fly or bottom ash and flue gas desulfurization byproducts may be disposed of at a restricted waste site Type I without characterization testing, or at a restricted waste site Type II, III, or IV, if the following are completed:

- (1) The waste is characterized as specified in ~~329 IAC 10-7-1~~ **329 IAC 10-7.2**.
- (2) The waste is classified as specified in ~~329 IAC 10-7-1~~ **329 IAC 10-7.2** for disposal and meets the criteria under subsection (b) for a restricted waste site Type II, III, or IV.
- (3) Resampling is conducted:
  - (A) at five (5) year intervals;
  - (B) whenever the characteristics of the coal changes;
  - (C) whenever the process generating the waste changes; or
  - (D) according to a schedule for resampling specified by the commissioner based on variability noted in previous sampling and other factors affecting the predictability of waste characteristics.

(f) (e) Foundry waste may be disposed of at a restricted waste site Type I, II, III, or IV if the following are completed:

- (1) The waste is characterized as specified in ~~329 IAC 10-7-1~~ **329 IAC 10-7.2**.
- (2) The waste is characterized as specified in ~~329 IAC 10-7-1~~ **329 IAC 10-7.2** for disposal and meets the criteria under subsection (b) for a restricted waste site Type I, II, III, or IV.
- (3) Resampling is conducted:
  - (A) at two (2) year intervals;
  - (B) whenever the process changes; or
  - (C) according to a schedule for resampling by the commissioner based on variability noted in previous sampling and other factors affecting the predictability of waste characteristics.

(g) (f) For waste other than those in subsections (c) through (d), the generator may request that the commissioner define test constituents and concentration limits needed to ~~make a determination of~~ **determine** which restricted waste site type ~~adequately~~ controls the expected hazards of the waste based on the chemical and physical characteristics of the waste. The commissioner may deny such a request for wastes that are heterogeneous, such as municipal garbage and trash and demolition debris, or wastes that are subject to organic decomposition, and other wastes for which test methods are inadequate to determine the hazards posed by the waste or its decomposition products.

~~(f) Notwithstanding~~ (g) **Except as provided in subsections (a) through (f), even if** sampling results that indicate that waste constituents exceed the criteria for a proposed restricted waste site type, the commissioner may approve the site if the permittee ~~adequately~~ demonstrates that:

- (1) the pH range encountered under leaching conditions likely to be encountered at the site will produce lower concentrations of waste constituents in any leachate generated;
- (2) due to precipitation, sorption, ion exchange, neutralization, reaction, or decomposition, the waste constituents will be removed from solution; or
- (3) dispersion and dilution likely to occur within the monitoring boundary, as defined in 329 IAC 10-2-113, will reduce the concentration of waste constituents in leachate as determined by the toxicity characteristic leaching procedure and leaching method tests.

(g) (h) The generator shall submit a comprehensive list, comparable to material safety data sheets, of all organic additives used in the process unit operations generating the waste. If trade names are given to additives, it is the generator's responsibility to contact the manufacturer about supplying the commissioner with the chemical ingredient listing that makes up the trade name chemical and to have the manufacturer contact the commissioner with the proper information. The commissioner may require organic testing of the additive.

(h) (i) Waste analyses submitted to the commissioner for review under subsections (a) through (g) must be accompanied by sufficient documentation of representative sampling and quality assurance and quality control measures to establish that the applicable procedures were conducted under adequate controls as stipulated in ~~329 IAC 10-7-1-4~~ **329 IAC 10-7.2**.

(i) (j) The person seeking the restricted waste site waste classification shall include a signed statement attesting that the information provided is true and accurate that states, "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that I am authorized to submit this information."

(j) (k) The results of the waste classification indicating the restricted waste type determined by the commissioner must be provided in writing to the generator of the waste. A waste classification is not considered valid unless provided in writing by the commissioner. (*Solid Waste Management Board; 329 IAC 10-9-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1805; errata filed Apr 4, 1996, 4:00 p.m.: 19 IR 2045; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1725, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 29. 329 IAC 10-14-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-14-2 Weighing scales**

**Authority:** IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
**Affected:** IC 13-19-3; IC 13-20-2; IC 24-6-3-5; IC 36-9-30

Sec. 2. (a) This section applies to either of the following:

- (1) Solid waste land disposal facilities receiving a permit from the department after January 1, 1994, that are required to install weighing scales.
- (2) Existing solid waste land disposal facilities required to install weighing scales under the following conditions:
  - (A) The solid waste land disposal facility is open to accept solid waste for disposal.
  - (B) Based on reporting results required by section 1(a) of this rule, the solid waste land disposal facility accepts in any calendar year an annual average of more than fifty (50) tons of solid waste per operating day.

(b) This section does not apply to any solid waste land disposal facility that receives solid waste from a person that:

- (1) generates the solid waste; and
- (2) disposes of the solid waste at a solid waste land disposal facility that is:
  - (A) owned by that person; and
  - (B) limited to use for the disposal of solid waste generated by that person.

(c) Solid waste land disposal facilities required to install weighing scales by subsection (a) must:

- (1) install the weighing scales within twelve (12) months of determining the installation is required;
- (2) notify the department in writing of the date the weighing scales became operable after installation;
- (3) effectively maintain and operate these weighing scales in accordance with IC 24-6;
- (4) submit to inspection of the weighing scales under IC 24-6-3-5; and
- (5) weigh all vehicles bringing solid waste to the **working face of the solid waste land disposal facility** and report the total weighed quantity of solid waste in tons as required by section 1 of this rule.

(d) In the event that the weighing scales required in subsection (a) break down or are operating improperly:

- (1) the solid waste land disposal facility owner, operator, or permittee may use the waste quantification methods in subsection (e) for the duration of the scale breakdown;
- (2) the solid waste land disposal facility owner, operator, or permittee shall submit a written notification of the breakdown with each quarterly tonnage report required under section 1 of this rule for each affected quarter;
- (3) the solid waste land disposal facility owner, operator, or permittee shall submit with the notification required by subdivision (2), the time frames for actions to be taken to repair the breakdown or inoperable weighing scales; and
- (4) the solid waste land disposal facility owner, operator, or permittee shall notify the department in writing that the weighing scales are operable after any repair.

(e) A solid waste land disposal facility required to report under section 1(a) of this rule but not required to install and operate weighing scales or a solid waste land disposal facility at which the scales are operating improperly or are temporarily inoperable shall use the most applicable of the following conversion factors to determine the weight of municipal solid waste from the volume of municipal solid waste:

- (1) Three and three-tenths (3.3) cubic yards of compacted solid waste equals one (1) ton of solid waste.
- (2) Six (6) cubic yards of uncompacted solid waste equals one (1) ton of solid waste.
- (3) One (1) cubic yard of baled solid waste equals one (1) ton of solid waste.

(f) Any solid waste land disposal facility accepting construction/demolition waste or **special pollution control** waste, required to report under section 1(a) of this rule that is not required by subsection (a) to install weighing scales to weigh solid waste, shall use accepted engineering practices, production information, or other methods approved by the department to estimate the weight of **these solid construction/demolition waste types and pollution control waste** received at the solid waste land disposal facility.

(g) Failure to install and operate weighing scales and to notify the department as required by this section constitutes an operational violation under 329 IAC 10-1-2. (*Solid Waste Management Board;*

*329 IAC 10-14-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1817; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3796)*

SECTION 30. 329 IAC 10-20-14.1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 10-20-14.1 Alternative daily cover**

Authority: IC 13-14-8-7; IC 13-15; IC 13-19-3  
 Affected: IC 13-11-2-215.1; IC 13-19-3; IC 13-20; IC 36-9-30

Sec. 14.1. (a) ~~An~~ **The** owner, operator, or permittee of an MSWLF unit **that is constructed** with a leachate collection system and composite liner **in accordance with 329 IAC 10-17** may apply ~~an~~ **a material** as alternative daily cover ~~(ADC) material under only in accordance with:~~

- (1) this section; and
- (2) **any requirements in the facility permit.**

(b) The following **materials** must not be applied as ~~ADC~~ **alternative daily cover:**

- (1) ~~Category A special waste. A solid waste that contains a toxicity characteristic contaminant listed in 40 CFR 261.24, Table 1, at a level equal to or greater than seventy-five percent (75%) of the regulatory level for that contaminant, determined in accordance with 329 IAC 3.1.~~
- (2) ~~Material that contains polychlorinated biphenyl (PCB) concentrations greater than twenty-five (25) parts per million; however, this material cannot be PCB containing as defined by 329 IAC 4-1-1(b).~~
- (3) ~~Material excluded from special waste requirements that is greater than or equal to seventy-five percent (75%) of the hazardous waste limit under the:~~

- (A) toxicity characteristic leaching procedure (TCLP) test; or
- (B) extraction procedure toxicity (EP Tox) test;

as applicable:

- (2) **Putrescible waste.**
- (3) **Medical waste.**
- (4) **Baghouse dust.**
- (5) **Biosolid that does not meet Class A criteria described in the rules of the water pollution control board at 327 IAC 6.1-4-13(c).**

~~(b) The~~ (c) **Unless permitted otherwise under subsection (f), all material used as alternative daily cover must meet the following ~~are~~ ADC performance standards:**

- (1) The material must meet ~~the disposal~~ **all requirements for MSWLFs under of this article for disposal in a municipal solid waste landfill.**
- (2) ~~Category B special waste must meet the verification process for disposal under 329 IAC 10-8-1.~~
- (3) ~~(2) Use of the material must control:~~ **not result in:**
  - (A) blowing litter; and
  - (B) disease vectors.
- (3) **The material must not be transported outside the solid waste boundary by wind or water.**
- (4) The material must not contribute to:
  - (A) fire;
  - (B) odor; or
  - (C) scavenging.
- (5) The material must not:
  - (A) be composed of ~~particle sizes that contribute to fugitive dust~~ **more than twenty percent (20%) particles smaller than six hundred (600) microns; or**
  - (B) **have a bulk density less than one (1) gram per cubic centimeter.**
- (6) **The material must not be soluble in water.**

- (7) A dry material must not exhibit a pH of:
- (A) less than or equal to five (5); or
  - (B) greater than or equal to ten (10);
- when tested in accordance with Method 9045C, "Soil and Waste pH," described in U.S. Environmental Protection Agency Publication SW-846.
- ~~(6) The material must not pose an exposure threat to workers~~
- (8) When applied as alternative daily cover in accordance with this section, the material must not present a threat to human health or the environment as follows:
- (A) The material must not exceed an exposure limit listed in any of the following:
    - (i) 29 CFR 1910, Subpart Z, revised as of July 1, 2001.
    - (ii) 29 CFR 1926.55, revised as of July 1, 2001.
    - (iii) 29 CFR 1926.62, revised as of July 1, 2001.
 29 CFR 1910 and 29 CFR 1926 are available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328.
  - (B) The material must not be ignitable under conditions that exist at the working face of the landfill.
- ~~(7) The maximum dimension of the material, with the exception of geotextile or plastic (tarp), must be fourteen (14) inches or less.~~
- (9) Waste must not be visible after application of the material as alternative daily cover.
- (10) Material containing PCB must be managed in accordance with 329 IAC 4.1.

~~(e) If the ADC is one (1) of the following and meets the performance standards under subsection (b); (d) The owner, operator, or permittee of the municipal solid waste landfill shall apply for an insignificant facility modification under in accordance with 329 IAC 10-3-3(b) to apply any of the ADC: following materials as alternative daily cover:~~

- (1) Altered tires.
- (2) Wood chips.
- (3) Compost.
- ~~(4) Category B Foundry sand. or foundry sand that is excluded from special waste under IC 13-11-2-215.1(b)(8):~~
- (5) Geotextile.
- (6) Plastic ~~(tarp); tarpaulin.~~
- ~~(7) Excluded Material under excluded from regulation by 329 IAC 10-3-1(1).~~
- (8) Dewatered publicly owned treatment works ~~(POTW)~~ sludge.
- (9) Dewatered paper sludge.
- (10) Petroleum contaminated soil.
- (11) Soil contaminated with vegetable oil.
- (12) PCB bulk product waste described in 40 CFR 761.62(b), revised as of June 24, 1999. 40 CFR 761 is available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328.

~~(d) If (e) The owner, operator, or permittee intends to apply: of the municipal solid waste landfill shall apply for an insignificant facility modification in accordance with 329 IAC 10-3-3(c) to apply a material that:~~

- ~~(1) an ADC that:~~
    - ~~(A) (1) is not listed under in subsection (e); (d); and~~
    - ~~(B) (2) meets the performance standards under in subsection (b); or~~
    - ~~(c) when delivered to the working face of the landfill.~~
  - ~~(2) Shredder fluff as an ADC;~~
- the owner, operator, or permittee shall apply for an insignificant facility modification under 329 IAC 10-3-3(c):

~~(e) If (f) The owner, operator, or permittee intends to of the municipal solid waste landfill shall apply an ADC that does not meet the requirements of subsection (d) and for a minor modification in accordance with 329 IAC 10-11-6 to apply a material as alternative daily cover that:~~

- ~~(1) is not listed under in subsection (e); (d); and~~
- ~~(2) does not meet the performance standards under in subsection (b); the owner, operator, or permittee shall apply for a minor modification under 329 IAC 10-11-6: (c) when delivered to the working face of the landfill but can be made to meet the performance standards using additional management practices at the landfill. The application for a minor modification must describe the management practices that will be used to make the material meet the performance standards in subsection (c).~~

~~(f) An (g) The owner, operator, or permittee of a municipal solid waste cell or unit that applies ADC alternative daily cover shall comply with all of the following requirements:~~

- ~~(1) Prior to the initial use of any one (1) ADC under this section; material as alternative daily cover, the owner, operator, or permittee shall notify the commissioner seven (7) Agriculture and Solid Waste Compliance Section, Office of Land Quality, at least five (5) working days prior to before the initial use of the any material as alternative daily cover.~~
- ~~(2) The ADC Alternative daily cover must only be used applied on:~~
  - ~~(A) areas that will have additional solid waste deposited within the next seven (7) working days; or~~
  - ~~(B) as approved by the commissioner.~~

~~Areas that have ADC (3) Alternative daily cover that is exposed for longer than seven (7) working days must be covered with soil: under~~

- ~~(A) as required by section 13(a) of this rule; or~~
- ~~(B) as approved by the commissioner.~~
- ~~(3) The ADC (4) Alternative daily cover must be placed on the working face by the end of each day of operation. ADC with the exception of~~
- ~~(5) Alternative daily cover, except geotextile or plastic (tarp); tarpaulin, must be applied:~~
  - ~~(A) at a minimum thickness of six (6) inches; or~~
  - ~~(B) as approved by the commissioner.~~
- ~~(6) Any solid waste that is not covered by ADC alternative daily cover must be covered under in accordance with section 13(a) of this rule.~~
- ~~(4) The ADC, with the exception of (7) Alternative daily cover, except geotextile or plastic (tarp); tarpaulin, must:~~
  - ~~(A) not be reapplied as daily cover; or~~
  - ~~(B) be applied as approved by the commissioner.~~

~~(5) (8) The owner, operator, or permittee shall retain the following information in the operating record for a period of one (1) year:~~

- ~~(A) The ADC source of the alternative daily cover material.~~
- ~~(B) Documentation used to determine compliance with subsection (b)(1).~~
- ~~(B) (C) Documentation that the ADC alternative daily cover material complies with the performance standards under subsection (b); (c), if applicable.~~
- ~~(6) The ADC (9) Material used as alternative daily cover must be stockpiled under applicable federal, state, and local regulations: in accordance with:~~
  - ~~(A) the provisions of this article regarding storm water pollution prevention; and~~
  - ~~(B) section 15 of this rule.~~

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(7) ~~An alternative~~ (10) A supply of ~~acceptable~~ daily cover ~~under material that meets the requirements of~~ section 13 of this rule must be readily available if the ~~ADC material used as alternative daily cover~~ does not meet the requirements of this section.

(g) (h) The commissioner may  
(+) modify the ~~procedures under subsection (f) for using~~; or  
(2) prohibit the use of;

revoke an approval under subsections (d) through (f) for application of any material that does not meet the requirements of this section. (Solid Waste Management Board; 329 IAC 10-20-14.1; filed Aug 2, 1999, 11:50 a.m.: 22 IR 3829; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 31. 329 IAC 10-28-24 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-28-24 Definitions

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2-148; IC 13-11-2-254; IC 13-19-3-3; IC 13-22; IC 13-30-2; IC 16-41-16-4; IC 36-1-2-23; IC 36-9-30

Sec. 24. As used in sections 22 and 23 of this rule, the following definitions apply:

(1) "Manifest" means the form used for identifying the quantity, origin, operators involved in a shipment, and the destination of municipal ~~solid~~ waste during its transportation.

(2) "Municipal waste", ~~refers to as defined in IC 13-11-2-133,~~ means any garbage, refuse, industrial lunchroom or office waste, and other ~~similar~~ material resulting from the operation of residential, municipal, commercial, or institutional establishments, and ~~from~~ community activities. The term does not include the following:

(A) ~~Special waste as defined in 329 IAC 10-2-179.~~

(B) (A) Hazardous waste regulated under: ~~IC 13-22~~

(i) IC 13-22-1 through IC 13-22-8 and IC 13-22-13 through IC 13-22-14; or ~~under~~

(ii) the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, as amended, 42 U.S.C. 6901 et seq., as in effect on January 1, 1990.

(C) (B) Infectious waste as defined in ~~329 IAC 10-2-96~~ IC 16-41-16-4.

(D) Waste (C) Wastes that results result from the combustion of coal and ~~is are~~ referred to in IC 13-19-3-3.

(E) (D) Materials that are being transported to a facility for reprocessing or reuse.

(E) As used in this subdivision, "reprocessing or reuse" does not include **either of the following**:

(i) Incineration. ~~or~~

(ii) Placement in a landfill.

(3) "Operator", ~~refers to as defined in IC 13-11-2-148(c),~~ means a corporation, a **limited liability company**, a partnership, a business association, a unit, (~~as defined in IC 36-1-2-23~~); or an individual who is a sole proprietor that is one (1) of the following:

(A) A broker.

(B) A person who manages the activities of a transfer station that receives municipal waste.

(C) A transporter.

(4) "Waste transfer activities", ~~refers to as defined in IC 13-11-2-254,~~ means the participation by a:

(A) broker or transporter who is:

(i) a resident of Indiana; or

(ii) not a resident of Indiana; or

(B) transfer station that receives municipal waste located;

(i) inside Indiana; or

(ii) outside Indiana;

in the collection or transportation of municipal waste for disposal or incineration in Indiana. (Solid Waste Management Board; 329 IAC 10-28-24; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1899; errata filed Dec 6, 1999, 9:41 a.m.: 23 IR 813; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 32. 329 IAC 10-36-19 IS AMENDED TO READ AS FOLLOWS:

### 329 IAC 10-36-19 Definitions

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2; IC 13-19-3-3; IC 13-22; IC 13-30-2; IC 36-1-2-23; IC 36-9-30

Sec. 19. As used in sections 17 and 18 of this rule, the following definitions apply:

(1) "Manifest" means the form used for identifying the quantity, origin, and operators involved in a shipment, and the destination of municipal solid waste during its transportation.

(2) "Municipal waste", ~~refers to as defined in IC 13-11-2-133,~~ means any garbage, refuse, industrial lunchroom or office waste, and other material resulting from the operation of residential, municipal, commercial, or institutional establishments, and ~~from~~ community activities. The term does not include the following:

(A) ~~Special waste, as defined in 329 IAC 10-2-179.~~

(B) (A) Hazardous waste regulated under: ~~IC 13-22~~

(i) IC 13-22-1 through IC 13-22-8 and IC 13-22-13 through IC 13-22-14; or ~~under~~

(ii) the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, as amended, 42 U.S.C. 6901 et seq., in effect on January 1, 1990.

(C) (B) Infectious waste as defined in ~~329 IAC 10-2-96~~ IC 16-41-16-4.

(D) Waste (C) Wastes that results result from the combustion of coal and that ~~is are~~ referred to in IC 13-19-3-3.

(E) (D) Materials that are being transported to a facility for reprocessing or reuse.

(E) As used in this subdivision, "reprocessing or reuse" does not include **either of the following**:

(i) Incineration. ~~or~~

(ii) Placement in a landfill.

(3) "Operator", ~~refers to as defined in IC 13-11-2-148(c),~~ means a corporation, a **limited liability company**, a partnership, a business association, a unit, (~~as defined in IC 36-1-2-23~~); or an individual who is a sole proprietor that is one (1) of the following:

(A) A broker.

(B) A person who manages the activities of a transfer station that receives municipal waste.

(C) A transporter.

(4) "Waste transfer activities", ~~refers to as defined in IC 13-11-2-254,~~ means the participation by a:

(A) broker or transporter who is:

(i) a resident of Indiana; or

(ii) not a resident of Indiana; or

(B) transfer station **that receives municipal waste** located:

(i) inside Indiana; or

(ii) outside Indiana;

**that receives municipal waste for** in the collection or transportation of municipal waste for disposal or incineration in Indiana. (Solid Waste

*Management Board; 329 IAC 10-36-19; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1915; errata filed Dec 6, 1999, 9:41 a.m.: 23 IR 813; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 33. 329 IAC 11-2-19.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 11-2-19.5 “Insignificant facility modification” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-19-3; IC 13-30-2; IC 36-9-30

Sec. 19.5. (a) “Insignificant facility modification”, as used in 329 IAC 11-9-6(b), means any of the following:

- (1) Add recycling activities and associated storage areas.
- (2) Add or modify outside storage of:
  - (A) white goods; or
  - (B) other scrap metal.
- (3) Modify facility traffic patterns.
- (4) Modify the size of a compactor.
- (5) Add or modify tipping floor entrance doors.
- (6) Add or modify the collection of household hazardous waste.
- (7) Add or modify a collection container.

(b) The term, as used in 329 IAC 11-9-6(c), means any of the following:

- (1) Accept more than two hundred twenty (220) pounds of uncontainerized pollution control wastes in a shipment.
- (2) Modify the waste water handling or disposition procedures.
- (3) Modify the drainage around the facility, except for normal maintenance.
- (4) Modify the latest approved facility layout.
- (5) Any modification to the permitted facility that the commissioner determines will improve the operation of the facility without altering the approved solid waste processing facility permit.

*(Solid Waste Management Board; 329 IAC 11-2-19.5)*

SECTION 34. 329 IAC 11-2-39 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-2-39 “Solid waste” defined**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1; IC 13-19-4-10  
Affected: IC 13-11-2-205; IC 13-19-3; IC 13-30-2; IC 36-9-30

Sec. 39. (a) “Solid waste” means any: has the meaning as set forth at IC 13-11-2-205.

- (1) garbage;
- (2) refuse;
- (3) sludge from a wastewater treatment plant;
- (4) sludge from a water supply treatment plant;
- (5) sludge from an air pollution control facility; or

(b) The following are examples of other discarded material: including

- (1) Ash residue.
- (2) Commercial solid waste defined in 329 IAC 10-2-32.
- (3) Construction/demolition waste defined in 329 IAC 10-2-37.
- (4) Hazardous waste.
- (5) Household waste or residential waste defined in 329 IAC 10-2-90.
- (6) Infectious waste.
- (7) Liquid waste special defined in 329 IAC 10-2-106.
- (8) Pollution control waste.
- (9) Municipal solid waste defined in 329 IAC 10-2-115.

(10) Regulated hazardous waste residential and nonresidential waste, and any solid, liquid, semisolid, or contained gaseous material: defined in 329 IAC 10-2-153.

(11) Industrial process waste.

(b) The term does not include:

- (1) solid or dissolved material in domestic sewage or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under Section 402 of the federal Water Pollution Control Act, 33 U.S.C. 1342 as amended February 4, 1987;
- (2) source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, 42 U.S.C. 2014 et seq. as amended October 24, 1992;
- (3) manures or crop residues returned to the soil at the point of generation as fertilizers or soil conditioners as part of a total farm operation; or
- (4) vegetative matter at composting facilities registered under IC 13-20-10.

*(Solid Waste Management Board; 329 IAC 11-2-39; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1931; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; errata filed May 8, 2002, 2:01 p.m.: 25 IR 2741)*

SECTION 35. 329 IAC 11-3-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-3-2 Exclusion; hazardous waste**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-19-3; IC 13-30-2; IC 36-9-30

Sec. 2. (a) Hazardous wastes are regulated by and shall be treated, stored, and disposed of in accordance with 329 IAC 3.1. Hazardous waste that is regulated by 329 IAC 3.1 is not subject to the provisions of this article.

(b) No hazardous waste which is regulated by 329 IAC 3.1 shall be disposed of at any solid waste facility regulated under this article.

(c) As used in this article, “hazardous waste that is regulated by 329 IAC 3.1” does not include CESQG hazardous waste that is generated in quantities less than one hundred (100) kilograms per month and is, therefore, excluded from regulation under the hazardous waste management article; 329 IAC 3.1. Such small quantities of as defined in 329 IAC 10-2-29.5. CESQG hazardous waste shall must be disposed of in accordance with 329 IAC 10 and 40 CFR 261.5, revised as of July 1, 2001. 40 CFR 261.5 is available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328.

(d) Facilities permitted under 329 IAC 3.1 are not required to obtain permits under this article for the storage, treatment, or disposal of nonhazardous solid waste where such solid waste is treated or disposed of as a hazardous waste at the receiving hazardous waste facility. *(Solid Waste Management Board; 329 IAC 11-3-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1934; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 36. 329 IAC 11-8-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-8-2 Processing facilities waste criteria**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30



Sec. 2. Solid waste processing facilities may accept all solid waste regulated under this article, ~~Special waste may be accepted at solid waste processing facilities in accordance with 329 IAC 11-7 and 329 IAC 10-8-1~~ except the following:

(1) Hazardous waste that is regulated by 329 IAC 3.1.

(2) Solid waste that is prohibited by the facility permit.

*(Solid Waste Management Board; 329 IAC 11-8-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1936; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1730, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 37. 329 IAC 11-8-2.5 IS ADDED TO READ AS FOLLOWS:

**329 IAC 11-8-2.5 Transfer station waste criteria**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 2.5. Transfer stations may accept the following solid waste:

(1) Municipal solid waste.

(2) Commercial solid waste.

(3) Construction/demolition waste.

(4) CESQG hazardous waste.

(5) Pollution control waste in accordance with the facility permit.

(6) Industrial process waste in accordance with the facility permit.

*(Solid Waste Management Board; 329 IAC 11-8-2.5)*

SECTION 38. 329 IAC 11-8-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-8-3 Incinerators waste criteria**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 3. Incinerators may accept all solid waste regulated under this article, except ~~special waste must be accepted at an incinerator in accordance with 329 IAC 11-7 and 329 IAC 10-8-1~~ the following:

(1) Hazardous waste that is regulated by 329 IAC 3.1.

(2) Solid waste that is prohibited by the facility permit.

*(Solid Waste Management Board; 329 IAC 11-8-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1936; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1730, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 39. 329 IAC 11-9-6 IS ADDED TO READ AS FOLLOWS:

**329 IAC 11-9-6 Insignificant facility modifications**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1

Affected: IC 13-14; IC 13-19-3; IC 13-30; IC 36-9-30

Sec. 6. (a) The permittee of a solid waste processing facility may make or propose an insignificant facility modification in accordance with this section.

(b) If a permittee of a solid waste processing facility makes an insignificant facility modification described in 329 IAC 11-2-19.5(a), the permittee shall provide notice to the commissioner no later than seven (7) calendar days after the modification has been made. The notice must include a detailed description of the modification and the date the modification was completed or is expected to be completed.

(c) If the permittee of a solid waste processing facility proposes

to make an insignificant facility modification described in 329 IAC 11-2-19.5(b), the permittee shall submit documentation of the proposed insignificant facility modification to the commissioner. The documentation must include a detailed description of the proposed modification.

(d) If the commissioner determines that the modification proposed under subsection (c) is a major or minor modification, the commissioner will notify the permittee in writing within thirty (30) days after receipt of the proposed modification that the permittee must submit an application for a minor or major modification to the current permit if the permittee plans to proceed with the proposed modification.

(e) If the permittee of the solid waste processing facility does not receive notification from the commissioner within thirty (30) days after submission of the proposed modification under subsection (c) to the commissioner, the permittee may initiate the insignificant facility modification in accordance with documentation provided to the commissioner.

(f) A permit modification is not required to modify the facility as necessary to:

(1) correct operational violations of this article; or

(2) protect human health or the environment.

*(Solid Waste Management Board; 329 IAC 11-9-6)*

SECTION 40. 329 IAC 11-13-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-13-4 Sanitation**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3

Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 4. (a) Solid waste must be confined to the designated storage, processing, loading, and unloading areas of the processing facility. The processing facility and adjacent areas must be maintained clean and litter free.

(b) Solid waste may not be stored overnight at the processing facility except in permitted storage areas or in enclosed transporting units.

(c) The solid waste processing facility must be cleaned as necessary to prevent a nuisance or public health hazard.

(d) Residues from solid waste processing facilities and incinerators ~~are special wastes and~~ must be disposed of in accordance with ~~329 IAC 10-8-1~~ 329 IAC 10.

(e) Salvaging, if undertaken, must not interfere with the facility operation or create unsightliness, nuisance, or health hazard.

(f) At a minimum, all salvage materials must be stored in buildings or transportable containers while awaiting removal from the facility. No alternative methods of storing salvage materials may be used without obtaining prior approval from the commissioner. Approval may be granted at the request of the permittee, if the permittee can demonstrate that the alternative method will provide a comparable level of environmental protection. *(Solid Waste Management Board; 329 IAC 11-13-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1942; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1730, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 41. 329 IAC 11-13-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-13-6 Records and reports**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
 Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 6. (a) The following must be furnished upon request and made available during normal operating hours for inspection by any officer, employee, or representative of the commissioner:

- (1) All solid waste processing facility records and reports required by this section, 329 IAC 11-14, and 329 IAC 11-15.
- (2) All test results of residues generated by the facility.
- ~~(3) All special waste certifications and disposal notifications required by 329 IAC 11-7 and 329 IAC 10-8.1 if applicable.~~

(b) Owners or operators of solid waste processing facilities shall maintain the records and reports required in subsection (a)(2) ~~and (a)(3)~~ until certification of post-closure is deemed acceptable if applicable. *(Solid Waste Management Board; 329 IAC 11-13-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1942; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1730, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 42. 329 IAC 11-15-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-15-1 Definitions**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-11-2; IC 13-19-3-3; IC 13-22; IC 13-30-2; IC 36-1-2-23; IC 36-9-30

Sec. 1. (a) In addition to the definitions found in 329 IAC 11-2 and IC 13-11-2, the definitions in this section apply throughout this rule.

(b) "Broker", as defined in IC 13-11-2-19, means a person who is in the business of making arrangements for the transportation of municipal waste that was generated by another person. ~~The term does not include an owner or operator of a solid waste processing facility who makes arrangements for transportation of municipal waste from their own facility.~~

(c) "Manifest" means the form used for identifying the quantity, origin, operators involved in a shipment, and destination of municipal solid waste during its transportation.

(d) "Municipal waste", ~~refers to~~ as defined in IC 13-11-2-133, means any garbage, refuse, industrial lunchroom or office waste, and other similar material resulting from the operation of residential, municipal, commercial, or institutional establishments, and from community activities. The term does not include the following:

- ~~(1) Special waste as defined in 329 IAC 11-2-44.~~
- ~~(2) (1) Hazardous waste regulated under: IC 13-22~~
  - (A) IC 13-22-1 through IC 13-22-8 and IC 13-22-13 through IC 13-22-14; or under
  - (B) the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976; as amended by the Hazardous and Solid Waste Amendments of 1984; as amended; 42 U.S.C. 6901 et seq. in effect on January 1, 1990.
- ~~(3) (2) Infectious waste as defined in 329 IAC 11-2-18. IC 16-41-16-4.~~
- ~~(4) (3) Wastes that result from the combustion of coal and that are referred to in IC 13-19-3-3.~~

~~(5) (4) Materials that are being transported to a facility for reprocessing or reuse. As used in this subdivision, "reprocessing or reuse" does not include either of the following:~~

- ~~(A) Incineration. or~~
- ~~(B) Placement in a landfill.~~

~~(e) "Operator", as defined in IC 13-11-2-148(c), means a corporation, a limited liability company, a partnership, a business association, a unit, (as defined in IC 36-1-2-23); or an individual who is a sole proprietor that is one (1) of the following:~~

- ~~(1) A broker.~~
- ~~(2) A person who manages the activities of a transfer station that receives municipal waste.~~
- ~~(3) A transporter.~~

~~(f) "Solid waste processing facility", as defined in IC 13-11-2-212, means a facility at which at least one (1) of the following is located:~~

- ~~(1) A solid waste incinerator.~~
- ~~(2) A transfer station.~~
- ~~(3) A solid waste shredder-baler.~~
- ~~(4) A solid waste baler-shredder.~~
- ~~(5) A resource recovery system.~~
- ~~(6) A composting facility.~~
- ~~(7) A garbage grinding system.~~

The term does not include a facility or an operation that generates solid waste.

~~(g) "Transporter", as defined in IC 13-11-2-238, means a person who is in the business of transporting municipal solid waste.~~

~~(h) "Waste transfer activities", as defined in IC 13-11-2-254, means the participation by a:~~

- ~~(1) broker or a transporter who is:~~
  - ~~(A) a resident of Indiana; or~~
  - ~~(B) not a resident of Indiana; or~~
- ~~(2) transfer station that receives municipal waste located:~~
  - ~~(A) inside Indiana; or~~
  - ~~(B) outside Indiana;~~

~~in the collection or transportation of municipal waste for disposal or incineration in Indiana. (Solid Waste Management Board; 329 IAC 11-15-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1944; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; errata filed May 8, 2002, 2:01 p.m.: 25 IR 2741)~~

SECTION 43. 329 IAC 11-19-2 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-19-2 Permit by rule**

Authority: IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
 Affected: IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 2. (a) All solid waste incinerators with a design capacity less than ten (10) tons per day, and infectious waste incinerators with a design capacity of less than seven (7) tons per day, will be deemed to have a permit under this article provided they comply with the following:

- (1) File a notification as a solid waste incinerator facility as required by section 1 of this rule.
- (2) Comply with 329 IAC 11-13-4 and 329 IAC 11-13-5.
- (3) Infectious waste incinerators with a design capacity of less than seven (7) tons per day must also comply with the requirements of 329 IAC 11-20-1.

(4) Operate in compliance with all applicable air pollution control standards and regulations and all conditions set forth in the permit.  
 (5) Notify the office of solid and hazardous waste management and all appropriate local government officials within twenty-four (24) hours after the permittee learns of the release, violation, shutdown, or damage of the following:

- (A) Any release of a contaminant in a quantity in excess of that allowed by permit conditions and appropriate regulations.
- (B) Any violation of operating requirements established in the permit.
- (C) Any unscheduled shutdown of the incinerator or associated equipment.
- (D) Any damage to the incinerator or associated equipment that could, if not repaired, result in a release of a contaminant in a quantity exceeding a control level established in the permit or applicable regulations.

(6) The incinerator must dispose of residues in accordance with ~~329 IAC 11-7 and 329 IAC 10-8.1 at a solid waste facility with a valid permit under 329 IAC 10.~~

(b) All solid waste incinerators with a design capacity greater than or equal to ten (10) tons per day, and less than or equal to thirty (30) tons per day, and infectious waste incinerators with a design capacity of greater than or equal to seven (7) tons per day, and less than or equal to thirty (30) tons per day, will be deemed to have a permit under this article provided they comply with the following:

- (1) File a notification as a solid waste incinerator facility as required by section 1 of this rule.
- (2) Submit an application for a solid waste processing facility permit, complying with 329 IAC 11-9, 329 IAC 11-16, and 329 IAC 11-17 within ninety (90) days of the notification required by section 1 of this rule.
- (3) Solid waste incinerators must comply with the requirements of ~~329 IAC 11-7 and 329 IAC 11-13~~ through 329 IAC 11-15.
- (4) Infectious waste incinerators that burn infectious waste must comply with the requirements of ~~329 IAC 11-7~~, 329 IAC 11-13 through 329 IAC 11-15 and 329 IAC 11-20.
- (5) The incinerator must operate in compliance with all applicable air pollution control standards and regulations and all conditions set forth in the permit.
- (6) The permit holder shall notify the office of solid and hazardous waste management and all appropriate local government officials within twenty-four (24) hours after the permittee learns of the release, violation, shutdown, or damage of the following:

- (A) Any release of a contaminant in a quantity in excess of that allowed by permit conditions and appropriate regulations.
- (B) Any violation of operating requirements established in the permit.
- (C) Any unscheduled shutdown of the incinerator or associated equipment.
- (D) Any damage to the incinerator or associated equipment that could, if unrepaired, result in a release of a contaminant in a quantity exceeding a control level established in the permit or applicable regulations.

(c) Permits granted under subsection (b) must remain in effect until such time as the commissioner takes action on the application submitted in compliance with 329 IAC 11-9, 329 IAC 11-16, and 329 IAC 11-17. (*Solid Waste Management Board; 329 IAC 11-19-2; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1947; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1731, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 44. 329 IAC 11-19-3 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-19-3 Solid waste incinerators 10 tons per day or greater; infectious waste incinerators seven tons per day or greater; operational requirements**

**Authority:** IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
**Affected:** IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 3. The following operational requirements apply to solid waste incinerators with a design capacity of ten (10) tons per day or greater and to infectious waste incinerators with a design capacity of seven (7) tons per day or greater:

- (1) The incinerator must not operate without a valid permit under this article and a valid permit from the office of air management or its designated local air pollution control agency and comply with the operational requirements of ~~329 IAC 11-7 and 329 IAC 11-13~~ through 329 IAC 11-15 and all permit conditions.
- (2) The incinerator must dispose of residues in accordance with ~~329 IAC 11-7 and 329 IAC 10-8.1 at a solid waste facility with a valid permit under 329 IAC 10.~~
- (3) The incinerator must operate in compliance with all applicable air pollution control standards and regulations and all conditions set forth in the permit.
- (4) The permittee shall notify the office of solid and hazardous waste management and all appropriate local government officials within twenty-four (24) hours after the permittee learns of the release, violation, shutdown, or damage of the following:

- (A) Any release of a contaminant in a quantity in excess of that allowed by permit conditions and appropriate regulations.
- (B) Any violation of operating requirements established in the permit.
- (C) Any unscheduled shutdown of the incinerator or associated equipment.
- (D) Any damage to the incinerator or associated equipment that could, if unrepaired, result in a release of a contaminant in a quantity exceeding a control level established in the permit or applicable regulations.

(*Solid Waste Management Board; 329 IAC 11-19-3; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1948; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1731, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 45. 329 IAC 11-20-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-20-1 Operational requirements**

**Authority:** IC 13-14-8-7; IC 13-15-2; IC 13-19-3  
**Affected:** IC 13-11-2; IC 13-19-3; IC 36-9-30

Sec. 1. (a) The following additional operational requirements apply to all infectious waste incinerators:

- (1) A solid waste incinerator that is used to burn infectious waste, except an existing incinerator equipped with an afterburner and achieving zero (0) opacity, must be a multiple chamber incinerator. Infectious waste incinerators must maintain a temperature of one thousand eight hundred (**1,800**) degrees Fahrenheit (~~+1,800°F~~) with a residence time of one (1) second in the secondary chamber.
- (2) Any solid waste incinerator that is used to burn antineoplastic agents must maintain a temperature of one thousand eight hundred (**1,800**) degrees Fahrenheit (~~+1,800°F~~) with a residence time of one and one-half (1½) seconds in the secondary chamber. As used in this

rule, "antineoplastic agents" means chemotherapy drugs, or compounds used in the treatment of cancer, which are not subject to regulation under 329 IAC 3.1. Containers or other items containing residues of antineoplastic agents must not be considered antineoplastic agents.

(3) Infectious waste incinerators constructed after January 1, 1988, must be equipped with an automatic mechanical loading device, and an interlock system must be provided to prevent charging until the secondary chamber exit temperature of one thousand eight hundred **(1,800)** degrees Fahrenheit (~~1,800°F~~) is established.

(4) Batch incinerators, fully loaded while cold and never opened until the burn cycle is complete, must incorporate a lockout system that will prevent ignition of the waste until the exit temperature of the secondary chamber or the afterburner reaches one thousand eight hundred **(1,800)** degrees Fahrenheit (~~1,800°F~~) and prevent recharging until the combustion and burndown cycles are complete.

(5) No waste must be charged to an incinerator other than a batch incinerator until the secondary chamber or afterburner has achieved a minimum temperature of one thousand eight hundred **(1,800)** degrees Fahrenheit (~~1,800°F~~). The secondary chamber or afterburner must achieve and maintain the required minimum temperature for fifteen (15) minutes before charging begins.

(6) During shutdowns, the secondary chamber or afterburner minimum temperature of one thousand eight hundred **(1,800)** degrees Fahrenheit (~~1,800°F~~) is to be maintained using auxiliary burners until the wastes are completely combusted and the burndown cycle is complete.

(7) Residue from an infectious waste incinerator must be disposed of in accordance with ~~329 IAC 11-7 and 329 IAC 10-8-1~~ **329 IAC 10**.

(b) All infectious waste incinerators that are not in compliance or not able to comply with the requirements of this rule must submit a detailed timetable for the modification of the facility necessary to bring the unit into compliance. This timetable must be submitted within one hundred eighty (180) days of ~~the effective date of this article~~ **April 14, 1996**.

(c) All infectious waste incinerators must be in compliance with this rule within eighteen (18) months of ~~the effective date of this article~~ **April 14, 1996**, unless a written extension has been granted by the commissioner. (*Solid Waste Management Board; 329 IAC 11-20-1; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1948; filed Jan 9, 1998, 9:00 a.m.: 21 IR 1732, eff one hundred eighty (180) days after filing with the secretary of state; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 46. 329 IAC 11-21-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-21-4 Monitoring of incoming municipal waste**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2-254; IC 13-19-3; IC 13-30-6-7

Sec. 4. (a) Incoming municipal waste must be monitored daily by transfer station employees. The monitoring must be conducted by personnel who are able to recognize the visual indications that:

- (1) ~~special waste as defined by 329 IAC 11-2-44~~ **prohibited by the facility permit;**
  - (2) hazardous waste regulated by 329 IAC 3.1; ~~and~~
  - (3) infectious waste as defined by 329 IAC 11-2-18; ~~or~~
  - (4) **regulated asbestos containing materials;**
- may be present in the municipal waste observed.

(b) The monitoring may be accomplished by either of the following methods:

- (1) Conducting, on a daily basis, a minimum of two (2) random inspections that must consist of a visual observation of all off-loaded municipal waste prior to processing.
- (2) An overview of the municipal waste on an ongoing basis by facility personnel.

(*Solid Waste Management Board; 329 IAC 11-21-4; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1950; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 47. 329 IAC 11-21-5 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-21-5 Record keeping**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2-254; IC 13-19-3; IC 13-30-6-7

Sec. 5. (a) Random inspections conducted under section 4(b)(1) of this rule must be recorded in a format established by the department.

(b) A facility conducting overview inspections of the incoming municipal waste under section 4(b)(2) of this rule must only record events in which ~~special waste, hazardous waste, or infectious waste~~ **any of the following** is found:

- (1) **Waste prohibited by the facility permit.**
- (2) **Hazardous waste.**
- (3) **Infectious waste.**
- (4) **Regulated asbestos containing material.**

Records of such events must be in a format established by the department.

(c) Inspection records must be maintained on-site and available for review by department personnel for a period of one (1) year from the date of the inspection or event. (*Solid Waste Management Board; 329 IAC 11-21-5; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1950; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535*)

SECTION 48. 329 IAC 11-21-6 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-21-6 Reporting**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
Affected: IC 13-11-2-254; IC 13-19-3; IC 13-30-6-7

Sec. 6. (a) Transfer stations that ~~are transporting transport and disposing dispose of~~ municipal waste at disposal facilities in Indiana ~~on or after the effective date of this rule~~; must submit to the office of ~~solid waste management land quality~~ by January 31 of each year an annual report, in a format established by the department, which identifies:

- (1) any inspection that detected any:
  - (A) **regulated asbestos containing materials;**
  - (B) **waste prohibited by the facility permit;**
  - (C) hazardous waste; or
  - (D) infectious waste;
 at the facility; and ~~its final~~
- (2) **the disposition of these wastes.**

(b) The report must include **all of** the following:

- (1) Name of facility.
- (2) Address of facility.
- (3) Permit number of facility.

- (4) Inspection date.
- (5) Name of person conducting each inspection.
- (6) Type of waste found and how it was handled, including final disposition.
- (7) Name and address of generator of waste found during an inspection if known.

(Solid Waste Management Board; 329 IAC 11-21-6; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1950; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 49. 329 IAC 11-21-7 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-21-7 Training**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-11-2-254; IC 13-19-3; IC 13-30-6-7

Sec. 7. The transfer station employee responsible for conducting the random inspections or constant overview required in section 4 of this rule shall be able to recognize the visual indications that ~~special waste, hazardous waste, and infectious waste~~ any of the following may be present in the municipal waste observed:

- (1) Waste prohibited by the facility permit.
- (2) Hazardous waste.
- (3) Infectious waste.
- (4) Regulated asbestos containing material.

(Solid Waste Management Board; 329 IAC 11-21-7; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1951; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 50. 329 IAC 11-21-8 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 11-21-8 General operating requirements**

Authority: IC 13-14-8-7; IC 13-15-2-1; IC 13-19-3-1  
 Affected: IC 13-11-2-254; IC 13-19-3; IC 13-30-6-7

Sec. 8. All transfer stations must be operated in a manner that minimizes the inclusion of liquids and vectors into the municipal waste shipped from the transfer station. Such management practices include, but are not limited to, the following:

- (1) All facility floors must be maintained so as to prevent standing water within the facility structure. All drainage and liquids originating from:
  - (A) storage, handling, and processing municipal waste;
  - (B) cleaning floors; or
  - (C) wash-out water from a municipal waste vehicle;
 must be properly directed to a sanitary sewer, a holding tank constructed and operated in accordance with any applicable local approvals, or the equivalent of a sanitary sewer or holding tank.
- (2) The facility tipping floor must be cleaned by wash-down to prevent odors and other nuisance conditions with all residuals being removed and disposed of properly.
- (3) Any municipal waste that is stored overnight at the facility, except nonputrescible waste that has been segregated for recycling, must be removed from the site the following operating day except for holidays and weekends. Any municipal waste stored overnight must be stored in a manner to promote vector control.
- (4) Any ~~hazardous waste, infectious waste, or special waste of the following~~ found at a transfer station must be managed in accordance with the applicable laws:
  - (A) Waste prohibited by the facility permit.
  - (B) Hazardous waste.

**(C) Infectious waste.**

**(D) Regulated asbestos containing material.**

(Solid Waste Management Board; 329 IAC 11-21-8; filed Mar 14, 1996, 5:00 p.m.: 19 IR 1951; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 51. 329 IAC 12-8-4 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 12-8-4 Examination requirements for Category II certification**

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-14-8-7; IC 13-15-10-4; IC 13-19-3-1; IC 13-19-3-2  
 Affected: IC 13-15-10; IC 13-19-3; IC 36-9-30

Sec. 4. (a) In order to qualify for accreditation as an accredited examination provider for Category II certification for operators of municipal and nonmunicipal solid waste disposal facilities, the written examination must meet the requirements of this section.

(b) The commissioner may approve an examination under the Category IV certification for a specific type of site. For operators of municipal and nonmunicipal solid waste disposal facilities, the examination for operator certification under Category IV must address any Category II topics in subsection (c) that are applicable to the type of site for which the examination has been developed.

(c) A Category II certification shall adequately address the following topics:

- (1) Purpose of training course.
- (2) An overview of municipal and nonmunicipal solid waste disposal facilities in integrated municipal solid waste management to address the following:
  - (A) Generation of municipal solid wastes.
  - (B) Physical and chemical composition of solid wastes.
  - (C) Municipal solid waste management.
- (3) Basics of site selection.
- (4) Complying with design requirements to the following:
  - (A) Specifications.
  - (B) Types of plans.
  - (C) Plan reading.
  - (D) Municipal and nonmunicipal solid waste facility landfill methods.
- (5) Waste acceptance and screening to include the following:
  - (A) Wastes prohibited by state and federal law and regulations.
  - (B) Commonly prohibited wastes.
  - (C) Wastes requiring special handling.
  - (D) ~~Special~~ Wastes **prohibited by the facility permit.**
  - (E) Screening methods for prohibited wastes.
  - (F) Record keeping and notification requirements.
  - (G) Public information and education.
- (6) Waste decomposition to include the following:
  - (A) Fate of wastes.
  - (B) Effects of decomposition.
  - (C) Subsidence and differential settlement.
  - (D) Landfill gas generation and migration.
  - (E) Leachate generation, migration, and control.
- (7) Control processes for landfill gas and leachate to include the following:
  - (A) Landfill gas and leachate characteristics.
  - (B) Managing landfill gas.
  - (C) Protection of facilities built on landfills.

- (D) Landfill gas recovery and use.
- (E) Managing leachate.
- (8) Operational techniques shall adequately address the following:
  - (A) Design and operational plans.
  - (B) Operational practices.
  - (C) Cover systems.
  - (D) Operation of a lined facility.
  - (E) Operational problems.
  - (F) Site operation to minimize environmental and health problems.
- (9) Closure and long term care shall adequately address the following:
  - (A) Site closure.
  - (B) Closure considerations.
  - (C) Closure plan.
  - (D) Long term care and environmental monitoring.
  - (E) Landfill site end uses.
  - (F) Final cover design.
  - (G) Vegetation.
  - (H) Financing closure and postclosure care.

*(Solid Waste Management Board; 329 IAC 12-8-4; filed Feb 3, 1997, 9:15 a.m.; 20 IR 1485; readopted filed Jan 1, 2001, 3:25 p.m.: 24 IR 1535)*

SECTION 52. 329 IAC 13-3-1 IS AMENDED TO READ AS FOLLOWS:

**329 IAC 13-3-1 Applicability**

**Authority:** IC 13-14-8-1; IC 13-14-8-2; IC 13-19-3  
**Affected:** IC 13-11-2; IC 13-14; IC 13-19; IC 13-20; IC 13-22; IC 13-23; IC 13-30; 40 CFR 261; 40 CFR 761.20(e)

Sec. 1. (a) The department presumes that used oil is to be recycled unless a used oil handler disposes of used oil or sends used oil for disposal. Except as provided in section 2 of this rule, this article applies to used oil, and to materials identified in this section as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in 40 CFR 261 Subpart C, **revised as of July 1, 2001.**

(b) Mixtures of used oil and hazardous waste must be handled as follows:

- (1) For mixtures of used oil with a listed hazardous waste, the following shall apply:
  - (A) Mixtures of used oil and hazardous waste that is listed in 40 CFR 261 Subpart D, **revised as of July 1, 2001**, are subject to regulation as hazardous waste under 329 IAC 3.1 rather than as used oil under this article.
  - (B) Used oil containing more than one thousand (1,000) parts per million total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in 40 CFR 261 Subpart D, **revised as of July 1, 2001**. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste. For example, this may be done by using an analytical method from EPA publication SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in 40 CFR 261 Appendix VIII, **revised as of July 1, 2001**. EPA publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, (202) 783-3238. Request document number 955-001-00000-1. The rebuttable presumption does not apply to the following:
    - (i) Metalworking oils or fluids containing chlorinated paraffins,

- if they are processed, through a tolling arrangement as described in 329 IAC 13-4-5(c), to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner or disposed.
- (ii) Used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.
- (2) Used oil mixed with characteristic hazardous waste identified in 40 CFR 261 Subpart C, **revised as of July 1, 2001**, are subject to 329 IAC 3.1.
- (3) Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under 40 CFR 261.5, **revised as of July 1, 2001**, are subject to regulation as used oil under this article.

(c) Materials containing or otherwise contaminated with used oil must be handled as follows:

- (1) Except as provided in subdivision (2), materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:
  - (A) are not used oil and thus not subject to this article; **and**
  - (B) if applicable, are subject to the hazardous waste regulations under 329 IAC 3.1. ~~and~~
  - ~~(C) if applicable, are subject to the solid waste regulations under 329 IAC 10 and 329 IAC 11.~~
- (2) Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this article.
- (3) Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under this article.

(d) Mixtures of used oil with products must be handled as follows:

- (1) Except as provided in subdivision (2), mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this article.
- (2) Mixtures of used oil and diesel fuel mixed on-site by the generator of the used oil for use in the generator's own vehicles are not subject to this article once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of 329 IAC 13-4.

(e) Materials derived from used oil must be handled as follows:

- (1) Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal, such as re-refined lubricants, are:
  - (A) not used oil and thus are not subject to this article; and
  - (B) not solid wastes and are thus not subject to the hazardous waste regulations under 329 IAC 3.1 as provided in 40 CFR 261.3(c)(2)(A), **revised as of July 1, 2001**.
- (2) Materials produced from used oil that are burned for energy recovery, such as used oil fuels, are subject to regulation as used oil under this article.
- (3) Except as provided in subdivision (4), materials derived from used oil that are disposed of or used in a manner constituting disposal are:
  - (A) not used oil and thus are not subject to this article; and
  - (B) are solid wastes and thus are subject to ~~(+) if applicable,~~ the hazardous waste regulations under 329 IAC

3.1 if the materials are listed or identified as hazardous waste. ~~and (ii) if applicable, the special waste regulations under 329 IAC 10-~~

(4) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to this article.

(f) Wastewater, the discharge of which is subject to regulation under either Section 402 or 307(b) of the Clean Water Act, **33 U.S.C. 1342 or 33 U.S.C. 1317(b)**, respectively, including wastewaters at facilities that have eliminated the discharge of wastewater, contaminated with de minimis quantities of used oil are not subject to the requirements of this article. As used in this subsection, "de minimis quantities of used oils" means small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, or to used oil recovered from wastewaters.

(g) Used oil introduced into crude oil pipelines or a petroleum refining facility must be handled as follows:

(1) Used oil mixed with crude oil or natural gas liquids, such as in a production separator or crude oil stock tank, for insertion into a crude oil pipeline is exempt from the requirements of this article. The used oil is subject to the requirements of this article prior to the mixing of used oil with crude oil or natural gas liquids.

(2) Mixtures of used oil and crude oil or natural gas liquids containing less than one percent (1%) used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of this article.

(3) Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of this article provided that the used oil constitutes less than one percent (1%) of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this article.

(4) Except as provided in subdivision (5), used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of this article only if the used oil meets the specification of section 2 of this rule. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this article.

(5) Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as an article of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of this article. This exemption does not extend to used oil that is intentionally introduced into a hydrocarbon recovery system, such as by pouring collected used oil into the wastewater treatment system.

(6) Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of this article.

(h) Used oil produced on vessels from normal shipboard operations is not subject to this article until it is transported ashore.

(i) In addition to the requirements of this article, marketers and burners of used oil who market used oil containing any quantifiable level of polychlorinated biphenyls (PCBs) are subject to the requirements found at 40 CFR 761.20(e), **revised as of June 24, 1999.**

**(j) 40 CFR 261 and 40 CFR 761 are available from the Superintendent of Documents, U.S. Government Printing Office, Mail Stop: SSOP, Washington, D.C. 20402-9328. (Solid Waste Management Board; 329 IAC 13-3-1; filed Feb 3, 1997, 9:15 a.m.: 20 IR 1494; readopted filed Sep 7, 2001, 1:35 p.m.: 25 IR 238)**

SECTION 53. THE FOLLOWING ARE REPEALED: 329 IAC 10-2-135.1; 329 IAC 10-2-179; 329 IAC 10-2-199.1; 329 IAC 10-2-201.1; 329 IAC 10-2.5; 329 IAC 10-7.1; 329 IAC 10-8.1; 329 IAC 10-20-29; 329 IAC 10-28-21; 329 IAC 11-2-44; 329 IAC 11-6-1; 329 IAC 11-7.

#### **Notice of First Meeting/Hearing**

*Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on August 20, 2002 at 1:30 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room A, Indianapolis, Indiana the Solid Waste Management Board will hold a public hearing on amendments to the solid waste management rules at 329 IAC 10 through 329 IAC 13.*

*The purpose of this hearing is to receive comments from the public prior to preliminary adoption of these rules by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the proposed amendments. Oral statements will be heard, but for the accuracy of the record, all comments should be submitted in writing.*

*Additional information regarding this action may be obtained from Steve Mojonner, Rules, Planning and Outreach Section, Office of Land Quality, (317) 233-1655 or dial (800) 451-6027 in Indiana, press "0", and ask for extension 3-1655.*

*Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:*

*Attn: ADA Coordinator*

*Indiana Department of Environmental Management*

*100 North Senate Avenue*

*P.O. Box 6015*

*Indianapolis, Indiana 46206-6015*

*or call (317) 233-0855 (V) or (317) 233-6565 (TT). Speech and hearing impaired callers may contact IDEM via the Indiana Relay Service at 1-800-743-3333. Please provide a minimum of 72 hours' notification.*

*Copies of these rules are now on file at the Indiana Department of Environmental Management Central File Room, Indiana Government Center-North, 100 North Senate Avenue, Room 1201, Indianapolis, Indiana and are open for public inspection.*

Mary Beth Tuohy

Assistant Commissioner

Office of Land Quality

Indiana Department of Environmental Management

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