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TITLE 329 SOLID WASTE MANAGEMENT BOARD

FINDINGS AND DETERMINATION OF THE COMMISSIONER PURSUANT TO IC 13-14-9-7, TENTATIVE RECOMMENDATION FOR RULEMAKING, AND SECOND NOTICE OF COMMENT PERIOD #00-255(SWMB)

DEVELOPMENT OF NEW RULES CONCERNING EXCLUSION OF A HAZARDOUS WASTE FROM REGULATION UNDER 329 IAC 3.1 (DELISTING)

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for new rules for exclusion of a hazardous waste from regulation under 329 IAC 3.1-5-2 (delisting). The purpose of this notice is to publish the commissioner's tentative recommendation for rulemaking and to seek public comment on the recommendation and the draft rule, including suggestions for specific language to be included in the rule. 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 3.1-6-6.

AUTHORITY: IC 13-14-8; IC 13-22-2.

STATUTORY REQUIREMENTS

IC 13-14-9-7 recognizes that under certain circumstances it may be appropriate to reduce the number of public comment periods routinely provided. In cases where the commissioner determines that the rulemaking policy alternatives available to IDEM are so limited that the notice of first public comment period would provide no substantial benefit, IDEM may forego this comment period and proceed directly to the notice of second public comment period.

If the commissioner makes the determination of limited rulemaking policy alternatives required by IC 13-14-9-7, the commissioner shall prepare written findings and include them in the second notice of public comment period published in the Indiana Register. This document constitutes the commissioner's written findings pursuant to IC 13-14-9-7.

The statute provides for this shortened rulemaking process if the commissioner determines that "the rulemaking policy alternatives available to the department are so limited that the public notice and comment period under [IC 13-14-9-3]... would provide no substantial benefit to:

- (1) the environment; or
- (2) persons to be regulated or otherwise affected by the proposed rule."

BACKGROUND

In its 1997 session, the General Assembly enacted P.L.128-1997 and P.L.45-1997 that required the solid waste management board to "adopt rules that provide procedures and criteria for delisting wastes as hazardous wastes". These statutes also required IDEM to "apply to the United States Environmental Protection Agency (EPA) for authority to receive petitions and delist wastes under 40 CFR 260.20 and 40 CFR 260.22". Delisting rules were adopted at 329 IAC 3.1-5-2 and 329 IAC 3.1-5-3, effective on March 19, 1998 (LSA Document #97-300, published May 1, 1998, 21 IR 2739). IDEM applied for authorization to delist hazardous wastes on February 10, 2000 (Authorization Revision Application 17). Indiana will receive authorization for delisting before adoption of this rule.

Generators of hazardous wastes may petition IDEM to exclude a specific hazardous waste listed in 40 CFR 261, Subpart D, that is generated at a particular facility from regulation as a hazardous waste under 329 IAC 3.1. This petition must be submitted in accordance with 329 IAC 3.1-5-2. The petition must include the information and meet the criteria required by 40 CFR 260.22.

Upon receipt of a petition that meets the requirements of 329 IAC 3.1-5-2, IDEM will evaluate the petition for the following:

- (1) To determine that the information provided in the petition complies with the requirements of 40 CFR 260.22.
- (2) To determine that the waste will meet the criteria in 40 CFR 260.22 when delisted.

(3) To determine that exclusion of the waste from regulation under 329 IAC 3.1 will not result in increased risk to human health and the environment.

(4) To determine that the delisted waste can be safely managed as described in the petition.

The specific criteria for delisting are contained in 40 CFR 260.22. The petitioner must demonstrate in the petition that the waste proposed for delisting meets all applicable criteria.

Delisting of a waste under 329 IAC 3.1-5-2 affects waste generated, managed, and disposed of in Indiana. No other state recognizes Indiana's delisting authority. A waste generated in Indiana and delisted under 329 IAC 3.1-5-2 will be considered a hazardous waste when it is transported outside of Indiana unless it has also been delisted by the EPA under 40 CFR 260.20 and 40 CFR 260.22.

PETITION FOR DELISTING

On May 13, 2000, Heritage Environmental Services, Inc. (Heritage) petitioned IDEM to delist a waste listed in 40 CFR 261.32 as "K061: emission control dust/sludge from the primary production of steel in electric furnaces." This waste is commonly known as electric arc furnace dust (EAFD). The EAFD for which delisting is requested is generated at Nucor Steel Corporation in Crawfordsville, Indiana. The delisted waste would be treated by Heritage using a proprietary treatment process described in the petition and disposed of in a nonmunicipal solid waste landfill owned and operated by Heritage in Roachdale, Putnam County, Indiana. The landfill is permitted under 329 IAC 10. The portions of the petition describing the proprietary process are protected from release under IC 5-14-3 and 329 IAC 6.1. Heritage has applied for a patent on the treatment process. When the patent is granted, those portions will become public record. The petition requested delisting of up to thirty thousand (30,000) cubic yards of treated EAFD annually.

The petition, except the portions protected from release by IC 5-14-3 and 329 IAC 6.1, and all documents related to IDEM's review and analysis of the petition and the treatment process described therein are available for viewing and copying in the Indiana Department of Environmental Management, Centralized File Room, Indiana Government Center-North, 100 North Senate Avenue, Room N1201, Indianapolis, Indiana.

ANALYSIS OF PETITION

The treatment process described in the petition consists of a reaction to make insoluble metal compounds. The treatment system weighs a specific amount of EAFD into a mixing device. Treatment reagents are added proportionally in a sequential manner to the mixing device. The mixing device thoroughly blends the EAFD and reagents. Once the reaction is completed, the treated waste is transferred to a dump truck and transported to the landfill. The exact treatment process was submitted as confidential business information in accordance with IC 5-14-3 and 329 IAC 6.1. IDEM has reviewed the petition and has determined that the treated waste is nonhazardous according to the criteria for which the waste was originally listed.

A risk assessment using a fate and transport model was used to predict concentrations of hazardous constituents released from the treated waste after disposal to evaluate the potential impact on human health and the environment. The risk assessment set specific concentrations that extracts of the treated waste must meet using several different extraction conditions. The risk assessment was based on the assumption of the annual volume and disposal method. However, some maximum extract concentration limits were set based on the maximum contaminant levels.

In addition to the hazardous constituents for which the waste was listed, several other hazardous constituents that were determined by analysis to be present in the waste were also evaluated. These constituents were other metals listed in 40 CFR 261.24. A sample of the waste was also tested for volatile organic compounds, semi-volatile organic compounds, and polychlorinated biphenyls. No volatile organic compounds, semi-volatile organic compounds, or polychlorinated biphenyls were detected in the waste.

The waste was sampled according to a sample and analysis plan developed by Heritage. The sample and analysis plan required sampling the treated waste on three random days of a week including one duplicate sample per week. Sampling took place for four consecutive weeks. An earlier sampling event also tested the waste during stainless steel production.

Heritage has demonstrated that the treated waste is stable over several different pH ranges. Each sample of the waste was extracted using the Toxicity Characteristic Leaching Procedure (TCLP), Method 1311 described in U.S. Environmental Protection Agency Publication SW-846, at the correct pH for the waste: pH 2.88. The waste was then extracted using the TCLP with deionized water adjusted to pH 6.5 substituted for the standard extraction fluid. The waste was also extracted using the TCLP substituting water adjusted to pH 12.0 for the standard extraction fluid. Heritage also extracted four samples of the waste using the multiple extraction procedure (SW-846 Method 1320). In the multiple extraction procedure, the same sample is extracted nine (9) times. The seventh, eighth, and ninth extracts were examined to determine if concentrations of analytes were increasing. The multiple extraction procedure was modified to use TCLP instead of the Extraction Procedure for Toxicity Test for the first extract. Subsequent extracts were conducted at neutral pH instead of a synthetic acid rain extraction fluid.

Certain other amendments were made to the extraction procedures and were submitted by Heritage as confidential business information. Those amendments will become public record upon granting of the patent on the treatment process. IDEM has reviewed those amendments and has determined that the assumptions and rationale for the amendments are reasonable. Certain conditions of

granting the petition are to ensure that the assumptions will remain valid.

The analytical data was validated by IDEM staff. Certain results are estimated values but are well below the maximum allowable concentrations and are acceptable.

The analytical results show that TCLP extract concentrations are below the land disposal restrictions of 40 CFR 268. The treated waste does not exhibit the characteristics of toxicity or reactivity. The waste is a solid; therefore, the characteristics of ignitability and corrosivity do not apply.

FINDINGS, DETERMINATION, AND TENTATIVE RECOMMENDATION FOR RULEMAKING

The commissioner of IDEM has prepared written findings and a tentative recommendation regarding rulemaking on delisting of the waste described in the petition submitted by Heritage. These findings are prepared under IC 13-14-9-7 and are as follows:

- (1) Based on the department's analysis of the petition described above, I have determined that the waste described in the petition meets the criteria in 40 CFR 260.22 for delisting when treated in accordance with the treatment process described in the petition. At this time, I recommend that the waste described in the petition be excluded from regulation under 329 IAC 3.1-5-2 with certain conditions as described in the draft rule attached to and incorporated in these findings. This recommendation is subject to public comment as provided below. This recommendation may be modified or reversed based on the comments received.
- (2) I have determined that under the specific circumstances pertaining to this rule, the rulemaking policy alternatives are so limited that the public notice and comment period provided in the notice of first public comment period would provide no substantial benefit to the environment or to persons to be regulated or otherwise affected by the rule.
- (3) The draft rule is hereby incorporated into these findings.

Lori Kaplan
Commissioner
Indiana Department of Environmental Management

INFORMAL PUBLIC HEARING

329 IAC 3.1-5-2(d) states that the commissioner may hold an informal public hearing to consider oral comments on the tentative recommendation for rulemaking. A person requesting a hearing must state the issues to be raised and explain why written comments would not suffice to communicate the person's views. A person who requests an informal public hearing on this petition must submit a request in writing to the address below.

REQUEST FOR PUBLIC COMMENTS

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

#00-255(SWMB)[Heritage EAFD Delisting]
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 (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) 232-1655 or (317) 232-7995.

COMMENT PERIOD DEADLINE

Comments must be postmarked or hand delivered by January 1, 2001.

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 (800) 451-6027 (in Indiana).

DRAFT RULE

329 IAC 3.1-6-6

SECTION 1. 329 IAC 3.1-6-6 IS ADDED TO READ AS FOLLOWS:

329 IAC 3.1-6-6 Waste excluded from regulation; Heritage Environmental Services, LLC and Nucor Steel Corporation, Crawfordsville, Indiana

Authority: IC 13-14-8; IC 13-22-2

Affected: IC 13-22

Sec. 6. Electric arc furnace dust (EAFD), hazardous waste code K061, that is generated by Heritage Environmental Services, LLC (Heritage) and Nucor Steel, Division of Nucor, Corporation (Nucor) at Nucor’s Crawfordsville, Indiana plant, and treated to be nonhazardous is excluded from regulation under this article so long as management of the waste complies with all of the following conditions:

(1) Delisting levels for the waste excluded by this section are the maximum level of any constituent in the treated EAFD as follows:

(A) The constituent concentrations measured in any of the extracts required by subdivision (2) must not exceed any of the levels listed in Table 1 as follows:

Table 1. Maximum Constituent Concentrations in TCLP Extracts

Antimony	0.206 mg/L
Arsenic	0.0936 mg/L
Barium	55.7 mg/L
Beryllium	0.416 mg/L
Cadmium	0.15 mg/L
Chromium (total)	1.55 mg/L
Lead	5.0 mg/L
Mercury	0.149 mg/L
Nickel	28.3 mg/L
Selenium	0.58 mg/L
Silver	3.84 mg/L
Thallium	0.088 mg/L
Vanadium	21.1 mg/L
Zinc	280 mg/L

(B) Total mercury in the treated waste must not exceed three and five-tenths (3.5) milligrams per kilogram.

(2) Heritage shall demonstrate on a monthly basis that the constituents in the treated EAFD do not exceed the delisting levels in subdivision (1) as follows:

(A) Heritage shall analyze two (2) representative samples of the treated EAFD each month using all of the following:

- (i) Method 1311, Toxicity Characteristic Leaching Procedure (TCLP), described in U.S. Environmental Protection Agency Publication SW-846, 3rd Edition, as amended by Updates I, IIA, IIB, and III (SW-846).
- (ii) Method 1311, substituting an extraction fluid with a pH 12.0 ± 0.05 standard units for the normal extraction fluid.
- (iii) Method 7471A, Mercury in Solid or Semi-Solid Waste (Manual Cold-Vapor Technique), described in SW-846.

(B) Detection levels must be less than the delisting levels in subdivision (1).

(C) Heritage must comply with Chapter 1, “Quality Control,” of SW-846.

U.S. Environmental Protection Agency Publication SW-846 is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

(3) Changes in the manufacturing process or the treatment process must be managed as follows:

(A) Heritage must notify the department in writing if any of the following occur:

- (i) If Nucor changes the manufacturing process or chemicals used in the manufacturing process from those described in the petition for delisting.
- (ii) If Heritage changes the treatment process or the chemicals used in the treatment process from those described in the petition for delisting.

(B) Heritage must handle all wastes generated after any process change as hazardous waste until all of the following occur:

(i) Heritage has demonstrated that:

(AA) the wastes continue to meet all delisting levels in subdivision (1); and

(BB) no new hazardous constituents listed in 40 CFR 261, Appendix VIII have been introduced.

(ii) Heritage has received written approval from the department to continue to manage the treated EAFD under this exclusion.

(4) Heritage must submit an annual report that summarizes the data obtained through monthly verification testing to IDEM by February 1 of each year. The report must include the results of each month’s analysis required by subdivision

(2) for the previous calendar year.

(5) Heritage must compile, summarize, and maintain records of operating conditions and analytical data. The records must be maintained for a minimum of five (5) years. The records must be made available for inspection by the department during normal working hours.

(6) If, at any time after disposal of the delisted waste, Heritage possesses or is otherwise made aware of any data relevant to the delisted waste indicating that any constituent identified in subdivision (1) is at a level in any TCLP extract that is higher than the delisting level listed in subdivision (1), then Heritage must report such data in writing to the commissioner within ten (10) days of first possessing or being made aware of that data.

(7) Ground water monitoring at the solid waste landfill that receives the treated EAFD must be conducted as follows:

(A) The ground water monitoring program for all cells containing the treated EAFD must comply with 329 IAC 10-21.

(B) In addition to the constituents listed in 329 IAC 10-21-15, constituents for detection monitoring must include all constituents listed in clause (C).

(C) If, at any time after disposal of the delisted waste, Heritage possesses or is otherwise made aware of any data relevant to the delisted waste indicating that any of the following constituents is at a level in the groundwater higher than the levels listed in Table 2:

Table 2. Maximum Allowable Concentrations in Ground Water

Antimony	0.006 mg/L
Arsenic	0.005 mg/L
Barium	2.0 mg/L
Beryllium	0.004 mg/L
Cadmium	0.005 mg/L
Chromium	0.1 mg/L
Cyanide	0.2 mg/L
Lead	0.015 mg/L
Mercury	0.002 mg/L
Nickel	0.753 mg/L
Selenium	0.05 mg/L
Silver	0.187 mg/L
Thallium	0.002 mg/L
Vanadium	0.263 mg/L
Zinc	11.25 mg/L
Sulfides	1.0 mg/L

then Heritage must report such data in writing to the commissioner within ten (10) days of first possessing or being made aware of that data.

(8) The treated EAFD must only be disposed of in Heritage Landfill, Roachdale, Putnam County, Indiana.

(9) No more than thirty thousand (30,000) cubic yards of treated EAFD may be treated or disposed of annually under this exclusion.

(10) Alternative daily cover must not be used to cover the treated EAFD. The treated EAFD must be covered daily in accordance with 329 IAC 10-28-12.

(11) No waste that is capable of oxidizing may be disposed of in the same cell as the treated EAFD.

(Solid Waste Management Board; 329 IAC 3.1-6-6)

Notice of First Meeting/Hearing

Under IC 4-22-2-24, IC 13-14-8-1, IC 13-14-8-2 and IC 13-14-9, notice is hereby given that on January 16, 2001 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 new rules at 329 IAC 3.1-6-6 for wastes delisted under 329 IAC 3.1-5-2.

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. 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 Steve Mojonnier, Rules, Planning and Outreach Section, Office of Land Quality, (317) 233-1655 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: Sue Zapf, ADA Coordinator
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015*

or call (317) 233-6947 (V) or (317) 233-6565 (TDD). Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Office of Land Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Centralized File Room, Room 1201, Indianapolis, Indiana and are open for public inspection.

Mary Beth Tuohy
Assistant Commissioner
Office of Land Quality