

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of Proposed Amendments
of the Rules Governing the Management of
Hazardous Waste by use of the Toxicity
Characteristic, Minn. Rules Pts. 7001.0640,
7045.0102, 7045.0120, 7045.0131, 7045.0133,
7045.0135, 7045.0216, 7045.0219, 7045.0230,
7045.0484, and 7045.0634

STATEMENT OF NEED
AND REASONABLENESS

I. INTRODUCTION

The subject of this proceeding is the amendment of the rules of the Minnesota Pollution Control Agency (hereinafter "Agency") governing the management of hazardous waste by use of the Toxicity Characteristic. Specifically, the amendments the Agency is proposing pertain to the following:

A. Replacement of extraction procedure (EP) toxicity with the Toxicity Characteristic. These amendments serve to bring state rules regarding the characteristics of hazardous waste into conformity with federal regulations by replacing the characteristic of EP toxicity with the Toxicity Characteristic. The amendments accomplish this by the replacement of the extraction procedure toxicity (EP-Tox) test, currently used in the analysis of hazardous waste, with the toxicity characteristic leaching procedure (TCLP).

B. Addition of twenty-five organic chemicals to the list of contaminants for the characteristic of toxicity. The TCLP tests for twenty-five contaminants for which the EP-Tox test could not. The proposed amendments add these chemicals to the list of contaminants for the characteristic of toxicity and establish regulatory levels for these contaminants.

C. Change in the name of the characteristic of toxicity unique to Minnesota rules from "toxicity" to "lethality." This change in terminology serves to avoid potential confusion resulting from the use of the term "toxicity" for two distinct characteristics. The proposed amendments address this by the substitution of the term "lethality" for the term "toxicity" in text referring to the toxicity characteristic unique to Minnesota rules.

The bulk of these amendments are based upon federally promulgated amendments. Amendments dealing with the Toxicity Characteristic were published in the Federal Register on March 29, 1990 (see Exhibit 1). Corrections to this publication were published in the June 29, 1990 Federal Register (see Exhibit 2). EPA has promulgated these amendments under the authority of the Hazardous and Solid Waste Amendments of 1984 (HSWA). Amendments promulgated under HSWA, such as the TC rule, are immediately effective in Minnesota on the effective date of the rule. The effective date for the Toxicity Characteristic (TC) rule is September 25, 1990 for large quantity generators and March 29, 1991 for small quantity generators. The remainder of the amendments are changes in terminology regarding the state characteristic of toxicity. The Agency is changing the title of the state characteristic to avoid confusion resulting from the similar language found in both the federally promulgated Toxicity Characteristic and the state characteristic of toxicity. Authority to adopt these amendments is provided under Minn. Stat. § 116.07, subd. 4 (1988).

This Statement of Need and Reasonableness is divided into seven parts. Following this introduction, Part II contains the Agency's explanation of the need for the proposed amendments. Part III discusses the reasonableness of the proposed amendments. Part IV documents how the agency has considered the methods of reducing the impact of the proposed amendments on small businesses as

required by Minn. Stat. § 14.115 (1988). Part V documents the economic factors the Agency considered in drafting the amendments as required by Minn. Stat. § 116.07, subd. 6 (1988). Part VI sets forth the Agency's conclusion regarding the amendments. Part VII contains a list of exhibits relied on by the Agency to support the proposed amendments. The exhibits are available for review at the Agency's offices at 520 Lafayette Road North, St. Paul, Minnesota 55155.

II. NEED FOR THE PROPOSED AMENDMENTS TO THE HAZARDOUS WASTE RULES

Minn. Stat. ch. 14 (1988) requires an agency to make an affirmative presentation of facts establishing the need for and reasonableness of the rules or amendments proposed. In general terms, this means that an agency must set forth the reasons for its proposal, and the reasons must not be arbitrary or capricious. However, to the extent that need and reasonableness are separate, need has come to mean that a problem exists which requires administrative attention and reasonableness means that the solution proposed by an agency is appropriate. Need is a broad test which does not easily lend itself to evaluation of each proposed revision. In the case of this proceeding, the need for amendments to the Agency's rules governing the management of hazardous waste has two bases: (A) the need for consistency with federal hazardous waste regulations; and (B) the need to provide clarity in the language of the hazardous waste rules.

A. Need for Consistency with Federal Regulations.

In 1976, Congress adopted the Resource Conservation and Recovery Act, or RCRA (42 U.S.C. § 6901 et seq.), to regulate the management of hazardous waste. In adopting RCRA, Congress provided for eventual state control of the hazardous

waste program and set up the mechanism for the EPA to grant authority to states to operate the program. In states that receive authorization, the state environmental agency administers the state program in lieu of the federal program. To receive and maintain authorization, the state program must be "equivalent" to the federal program and consistent with federal or state programs applicable to other states. EPA has defined equivalent to mean that the state requirements are at least as stringent as federal requirements. In terms of consistency, EPA's goal is to achieve an integrated national program which requires that final state programs do not conflict with each other or with the federal program.

Minnesota received final authorization from EPA for its hazardous waste program pursuant to RCRA effective February 11, 1985 (see 50 FR 3756, published on January 28, 1985). A state with final authorization administers its hazardous waste program in lieu of the EPA program for those regulations which were promulgated pursuant to RCRA. In order to maintain authorization, the state must enact equivalent requirements within specific time frames when new, more stringent federal requirements are promulgated by EPA. Federal regulations promulgated under RCRA are not in effect in Minnesota until the state rules are amended to incorporate the federal changes. However, federal regulations promulgated under HSWA, such as the TC rule, become effective nationally regardless of state authorization and subsequently are enforced by EPA until the states modify their programs to adopt HSWA amendments. Thus, Minnesota must modify its hazardous waste program by adopting HSWA amendments and apply for and receive authorization under HSWA in order to enforce HSWA provisions in lieu of

EPA as part of its authorized state program. Since the TC rule is promulgated under HSWA, the Agency proposes adopting these amendments in order to be consistent with federal regulations and to remain authorized by the EPA to administer its hazardous waste program.

B. Need to Provide Clarity in the Language of the State Hazardous Waste Rules.

New rules and amendments must never conflict with existing rules in either content or form. Although the adoption of the TC rule does not conflict with existing rules in content, there is a strong possibility of confusion resulting from similarity in linguistic form between the TC rule and the existing rules regarding the state toxicity characteristic. Both rules refer to "toxicity" and "the characteristic of toxicity." In order to clarify the distinction between the two rules, the state toxicity characteristic will be known as the characteristic of "lethality" and the federally promulgated rule is to be known as the "toxicity characteristic." This is simply a change in terminology which will not affect the content of the current rule. In the interest of clarity, the Agency believes there is a need to make this change in terminology.

III. REASONABLENESS OF THE PROPOSED AMENDMENTS

The Agency is required by Minn. Stat. ch. 14 (1988) to make an affirmative presentation of facts establishing the reasonableness of the proposed rules or amendments. The Agency proposes to incorporate federal requirements promulgated by EPA. A complete discussion of the reasonableness of the federal amendments is presented in Exhibits 1 and 2 listed in Part VII of this document, which are

hereby incorporated by reference. Proposed amendments to state rules due to the federal amendments are found in Minn. Rules pts. 7045.0102, 7045.0120, 7045.0131, 7045.0135, 7045.0216, 7045.0219, 7045.0230, and 7045.0634. The Agency also proposes to amend its own rules by changing the existing language of rules regarding the state characteristic of toxicity. It is reasonable to change the existing language of the state rule to avoid potential confusion resulting from the use of the term "toxicity" in referring to two different characteristics. Proposed amendments to state rules due to changes in the existing language for the sake of clarity are found in Minn. Rules pts. 7001.0640, 7045.0102, 7045.0131, 7045.0133, and 7045.0484. The reasonableness of each proposed amendment to the state hazardous waste rules is discussed below.

A. Minn. Rules pt. 7001.0640 Additional Part B Information Requirements for Surface Impoundments, Waste Piles, Land Treatment Units, and Landfills

The existing hazardous waste rules in Minn. Rules pt. 7001.0640 give additional information requirements for surface impoundments, waste piles, land treatment units, and landfills. The Agency proposes changing the term "toxicity" to "lethality" for the reasons outlined below for changing the terminology of Minn. Rules pt. 7045.0131, subp. 6. It is reasonable to make this change in terminology for the sake of clarity of language and meaning.

B. Minn. Rules pt. 7045.0102 Mixtures of Hazardous and Nonhazardous Wastes

The existing hazardous waste rules in Minn. Rules pt. 7045.0102 regulate the mixing of hazardous and nonhazardous wastes. Items A, B, C, and D of this part make reference to the characteristics of EP toxicity and toxicity. To be consistent with federal regulations, the Agency is proposing to replace the

characteristic of EP toxicity with the Toxicity Characteristic. In order to avoid confusion resulting from similar terminology between the Toxicity Characteristic and the state characteristic of toxicity, the Agency proposes to change the name of the state toxicity characteristic from "toxicity" to "lethality". It is reasonable to make this linguistic change for the sake of clarity of language and meaning.

In subpart 2, item D of this part, the words "prior to" are to be changed to "before" upon recommendation of the Office of the Revisor of Statutes (Revisor).

C. Minn. Rules pt. 7045.0120 Exempt Wastes

The existing hazardous waste rules in Minn. Rules pt. 7045.0120 exempt specific wastes from regulation as hazardous wastes. The Agency proposes to adopt this exemption from the federal amendments for petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic (waste codes D018 through D043 only) and are subject to corrective action under the hazardous waste rules for underground storage tanks (USTs). This exemption is provided for in Exhibit 1 of this document, with corrections to this amendment found in Exhibit 2 of this document. The UST rules are found in 40 CFR 280 and Minn. Rules ch. 7150. It is reasonable to exempt these wastes from regulation under the Toxicity Characteristic since these wastes are already regulated under the UST rules. Regulating these wastes under the Toxicity Characteristic would be unreasonable since current rules adequately regulate these wastes.

D. Minn. Rules pt. 7045.0131 Characteristics of Hazardous Wastes

The existing hazardous waste rules in Minn. Rules pt. 7045.0131 set forth the characteristics of hazardous wastes. The characteristic of toxicity unique

to Minnesota state rules is found in subpart 6 of this part. The Agency proposes to change the term for this characteristic from "toxicity" to "lethality" to avoid confusion with the terminology of subpart 7 for the Toxicity Characteristic. The term "lethality" is appropriate because the test used to determine the characteristic involves administration of median lethal doses and concentrations of sample wastes to laboratory animals. It is reasonable to make this change in terminology in the interest of clarity. It is reasonable to change the term used for the state characteristic rather than for the federal characteristic in order to preserve uniformity of language between state and federal rules.

Subpart 7 of Minn. Rules pt. 7045.0131 describes the characteristic of EP toxicity. The Agency proposes to adopt the federal amendments replacing the characteristic of EP toxicity with the Toxicity Characteristic. The Agency must do so in order to keep state rules in conformity with federal regulations. The main vehicle for this replacement of characteristics is the adoption of the TCLP in place of the EP-Tox test. The EPA has adopted the TCLP as the official test for the characteristic of toxicity because it is more accurate and rigorous than the EP-Tox test. The TCLP should provide greater protection for human health and the environment for these reasons. Thus, it is reasonable for the Agency to adopt the Toxicity Characteristic in order to conform to federal regulations and to provide greater protection for human health and the environment.

The reference to Code of Federal Regulations, title 40 in item A of this subpart is to be changed from a reference to the 1983 edition to a reference lacking a specific year of publication. By not specifying the year of publication, the most recent publication as amended is implied by the reference.

This change will eliminate the need to update the reference periodically. It is reasonable to change this citation to insure proper cross-referencing between the state and federal documents.

The words "set forth" are to be removed from item A of this subpart upon recommendation of the Revisor.

In Subpart 1 of Minn. Rules pt. 7045.0131 the terms "toxicity" and "extraction procedure (EP) toxicity" will be changed to "lethality" and "toxicity" respectively in light of the amendments to subparts 6 and 7 of this part as explained above.

Subpart 8 of Minn. Rules pt. 7045.0131 lists contaminants for the characteristic of toxicity. The Agency proposes adopting the federal amendments to the list of contaminants for the toxicity characteristic. This amendment will add twenty-five contaminants and their maximum regulatory concentration levels to the list. It is reasonable for the Agency to adopt these proposed amendments in order to remain in conformance with federal regulations and to be able to administer the TC rule properly. The expansion of the list of contaminants is an integral part of the Toxicity Characteristic rule and a direct result of adoption of the TCLP. The TCLP is able to test for these additional contaminants, so the expanded list must accompany the adoption of the TCLP.

In adopting the new list, the Agency has not included footnote 3 of the federal text (see Exhibit 1) which indicates three wastes whose quantitation limits are greater than their regulatory levels (2,4-Dinitrotoluene, Hexachlorobenzene, and Pyridine). Footnote 3 states that where a quantitation limit is greater than the calculated regulatory level, the quantitation limit

becomes the regulatory level. The Agency does not feel that it is necessary to provide this information in the list since the actual regulatory level for these chemicals is provided on the list of contaminants.

E. Minn. Rules pt. 7045.0133 Exemption From Listing Due to Toxicity

The existing hazardous waste rules in Minn. Rules pt. 7045.0133 give the requirements for exemption from regulation of wastes as hazardous due to toxicity. The Agency proposes to change the terms "toxicity" and "toxic" found throughout this part to "lethality" and "lethal" for reasons given above for changing the terminology of Minn. Rules pt. 7045.0131, subp. 6.

The Agency also proposes to re-title the part from "Exemption from Listing Due to Toxicity" to "Exemption from Regulation Due to Toxicity" since wastes are not actually listed due to this characteristic. It is reasonable to change the term from "listing" to "regulation" for the sake of clarity and accuracy.

The reference to pt. 7045.0131, subp. 6, items A and B will be made less specific by excluding items A and B from the reference. It is reasonable to broaden the reference so that all aspects of the cited rule will be reviewed and considered.

F. Minn. Rules pt. 7045.0135 Lists of Hazardous Wastes

Subp. 1 of Minn. Rules pt. 7045.0135 sets out the general basis for the listing of hazardous wastes. The Agency proposes to amend this subpart by replacing the hazard code of EP toxic waste with the designation of Toxicity Characteristic waste. The waste code abbreviation (E) used for EP toxic waste will be retained for Toxicity Characteristic waste. It is reasonable to change the designation in order to conform with the other aspects of the Toxicity Characteristic rule and to keep state rules in line with federal regulations.

G. Minn. Rules pt. 7045.0216 Evaluation Reports to the Commissioner

Subpart 1 of Minn. Rules pt. 7045.0216 details the necessary information which hazardous waste generators must supply on request of the commissioner. The Agency proposes to amend item C of this part by replacing the reference to EP toxicity with a reference to the Toxicity Characteristic. This is reasonable in light of the proposed amendments to pt. 7045.0131, subps. 7 and 8 which replace the characteristic of EP toxicity with the Toxicity Characteristic and expand the list of contaminants for the Toxicity Characteristic. Item C makes reference to EP toxicity and pt. 7045.0131, subp. 8, so it will refer to the Toxicity Characteristic and the expanded list.

H. Minn. Rules pt. 7045.0219 Special Requirements for Small Quantity Generators of Hazardous Waste.

Minn. Rules pt. 7045.0219 sets out the special requirements for generators of less than 1000 kilograms/month of hazardous waste. A new subpart is being added to this part by the proposed amendments which extends the date of compliance to the TC rule for small quantity generators until March 29, 1991. This extension is also found in the federal TC rule. It is reasonable to extend the date of compliance for small quantity generators in order to give the Agency time to educate them as to the requirements of the TC rule and RCRA. This new subpart will apply to all generators of less than 1000 kilograms/month of hazardous waste.

I. Minn. Rules pt. 7045.0230 Content of Disclosure

Subpart 1 of Minn. Rules pt. 7045.0230 sets out the required contents of disclosures. The Agency proposes to amend item D of this part by replacing the reference to the EP-Tox test with the TCLP. The Agency proposes this amendment

in order to conform to the federal amendments which replace the EP-Tox test with the TCLP. It is reasonable to make this amendment in light of the proposed amendments to pt. 7045.0131, subp. 7 which effect this replacement.

J. Minn. Rules pt. 7045.0484 Groundwater Protection

Minn. Rules pt. 7045.0484 sets out the standards for groundwater protection for facilities that treat, store, and dispose of hazardous waste. Subpart 4 of this part refers to the toxicity characteristic of pt. 7045.0131, subp. 6. In light of the proposed amendments to pt. 7045.0131, subp. 6, the Agency proposes to amend pt. 7045.0484, subp. 4 by changing the references to toxicity to references to lethality. It is reasonable to make this change in light of the other proposed amendments in this rulemaking.

K. Minn. Rules pt. 7045.0634 Waste Analysis Requirements

Subpart 3 of Minn. Rules pt. 7045.0634 contains the requirements for waste analysis for land treatment facilities. Item A of this part refers to the EP toxicity characteristic. The Agency proposes to amend this item by changing the reference to the EP toxicity characteristic to a reference to the Toxicity Characteristic. This is reasonable in light of the proposed amendments to pt. 7045.0131, subp. 7 of this rulemaking which effect the replacement of the characteristic of EP Toxicity with the Toxicity Characteristic.

IV. SMALL BUSINESS CONSIDERATIONS IN RULEMAKING

To comply with Minn. Stat. § 14.115 (1988), the Agency has considered the statutory methods for reducing the impact of the proposed rules on small business. The statute requires that each of the following methods be considered:

1. The establishment of less stringent compliance or reporting requirements;
2. The establishment of less stringent schedules or deadlines for compliance or reporting requirements;
3. The consolidation or simplification of compliance or reporting requirements;
4. The establishment of performance standards for small businesses to replace design or operational standards in the rule; and,
5. The exemption of small businesses from any or all requirements of the rule.

It should be noted that the volume of hazardous waste generated by a business is not directly proportional to its size. Many small businesses generate large quantities of hazardous waste. Therefore, generators are classified by volume of generation rather than by size of business. Regulation by volume of waste generated rather than by business size thus insures better protection for human health and the environment. For these reasons, in attempting to establish less stringent requirements for small businesses within its rules, the Agency cannot consider only the size of a business. Instead, the Agency must consider the amount of hazardous waste which a business generates.

In order to remain authorized by EPA to administer its hazardous waste program under RCRA, the Agency must adopt all federally mandated amendments and rules which are more stringent than existing state rules. The TC rule is a more

stringent rule and thus the Agency must adopt it. Because the Agency must adopt the TC rule, methods 1, 4, and 5 cannot be allowed for small businesses which generate significant quantities of hazardous waste. However, there are some aspects of methods 2 and 3 included in the TC rule that should favorably affect small businesses that generate hazardous waste in small quantities.

The TC rule establishes a less stringent schedule for compliance for small quantity generators (SQGs), which are generators of greater than 100 and less than 1,000 kilogram/month of hazardous waste. Under the new rule, SQGs are given until March 29, 1991 to comply with the TC rule, while large quantity generators (LQGs), which are generators of 1,000 kilogram/month or more of hazardous waste, must comply by September 29, 1990. EPA believes that these additional six months will both provide necessary time for SQGs to comply with the TC rule and allow EPA time to educate SQGs on RCRA rules. This aspect of the rule will apply to SQGs in Minnesota. In addition, Minnesota hazardous waste rules recognize an additional category of generators known as very small quantity generators (VSQGs) which are generators of less than 100 kilograms/month of hazardous waste. This less stringent schedule of compliance will also apply to VSQGs. Any small businesses which are also SQGs or VSQGs will benefit from this less stringent schedule of compliance.

The TC rule provides for simplification of reporting requirements for all generators. Generators with an EPA identification number who have already notified EPA that they generate hazardous wastes other than those resulting from the proposed rule are not required to notify EPA that they generate a "new" toxic waste based on the TCLP. This will aid in the consolidation of reporting

requirements for small businesses that generate hazardous waste. Generators must file an amended disclosure form with the Agency, however, if they generate a waste found to be toxic by TCLP which was not found to be toxic by the EP-Tox test.

The proposed amendments dealing with the change in terminology for the state toxicity characteristic do not change the content of the rule, so they will have no effect on small businesses.

V. CONSIDERATION OF ECONOMIC FACTORS

In exercising its powers, the Agency is required by Minn. Stat. § 116.07, subd. 6 (1988) to give due consideration to economic factors. The statute provides:

In exercising all its powers, the Pollution Control Agency shall give due consideration to the establishment, maintenance, operation, and expansion of business, commerce, trade, industry, traffic, and other economic factors and other material matters affecting the feasibility and practicability of any proposed action, including, but not limited to, the burden on a municipality of any tax that may result therefrom, and shall take or provide for such action as may be reasonable feasible, and practical under the circumstances.

The TC rule will incur great economic costs. EPA estimates that national social costs due to the TC rule will range from \$1.3 billion to \$5.7 billion per year. Between 15,000 and 17,000 generators will be affected nationwide. Although these costs are substantial, they are short term costs which are far outweighed by the long-term benefits of the rule. The TC rule is expected to nationally save \$3.8 billion per year due to reduction in resource damage and

help avoid loss of \$15 billion per year due to cleanup costs. In the long run, the TC rule will provide economic savings and added protection to human health and the environment.

The TC rule will increase laboratory testing costs in many cases as well. The EP-Tox test, which the TCLP is replacing, was a less expensive test to perform. The EP-Tox test cost between \$250 and \$400 per sample whereas the TCLP costs about \$1,000 per sample to perform. However, the TC rule explicitly states that generators may apply knowledge of their wastes in determining whether or not the wastes are hazardous. This means that testing is not mandatory and testing costs can be avoided through generator certification. Also, the TCLP can be broken down into four separate tests (tests for metals, pesticides, semi-volatile constituents, and volatile constituents). Generators may apply knowledge of their waste and only conduct the specific parts necessary to evaluate their particular wastes, rather than running the full range of tests. This is another way in which laboratory testing costs can be reduced.

The Agency believes that increased costs for treatment, storage, disposal, and testing resulting from the TC rule will be mitigated in the future by the prevention of resource loss, the avoidance of cleanup costs, and the further protection of human health and the environment.

VI. CONCLUSION

The Agency has, in this document and its exhibits, made its presentation of facts establishing the need for and reasonableness of the proposed amendments to Minnesota's hazardous waste rules. This document constitutes the Agency's Statement of Need and Reasonableness for the proposed amendments to the hazardous waste rules.

VII. LIST OF EXHIBITS

The MPCA is relying on the following documents to support these amendments:

Agency Ex. No.	Title
1	Federal Register, Vol. 55, No. 61, pages 11799-11877, March 29, 1990.
2	Federal Register, Vol. 55, No. 126, pages 26985-26998, June 29, 1990.

September 14, 1990
Date

for Ann Hume
Gerald L. Willet

