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STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

STATEMENT OF NEED
AND REASONABLENESS

In the Matter of Proposed
Rules and Amendments to Rules
Governing Hazardous Wastes, Minnesota

Rules Parts: 7001.0150, 7001.0590,
7001.0600, 7001.0620, 7045.0020, 7045.0125,
7045.0135, 7045.0139, 7045.0214, 7045.0452,
7045.0461, 7045.0478, 7045.0532, 7045.0534,
7045.0538, 7045.0556, 7045.0584, 7045.0630,
7045.0632, 7045.0638, 7045.1305, 7045.1335,
7045.1355, and 7045.1360.

I. INTRODUCTION

The Minnesota Pollution Control Agency (MPCA) proposes to modify its hazardous waste program by adopting seven sets of federally promulgated hazardous waste regulations, and amendments to regulations, into the Minnesota Rules. The MPCA adopts these regulations with only minor changes and corrections as needed for consistency with the Minnesota Rules. Each set of regulations is contained in a numbered U.S. Environmental Protection Agency (EPA) Revision Checklist (checklist). This rulemaking adopts the following checklists:

1. Checklist 81 (adopted under authority of the Hazardous and Solid Waste Amendments of 1984 [HSWA]), entitled Petroleum Refinery Primary & Secondary Oil/Water/Solid Separation Sludge Listings. This provision was promulgated in Vol. 55 of the Federal Register, (FR) page 46354 (55 FR 46354) on December 17, 1991,

2. Checklist 89 (HSWA), Revision to F037 and F038 Listings.

This revision makes Checklist 81 provisions slightly less restrictive and is therefore optional, but the EPA strongly encourages adopting these revisions which were based on comment at the same time as Checklist 81. (56 FR 21955 on May 13, 1991),

3. Checklist 95 (HSWA), Land Disposal Restrictions for Electric Arc Furnace Dust (56 FR 41164 on August 19, 1991),

4. Checklist 100 (adopted under authority of both HSWA and the Resource Conservation and Recovery Act of 1980 [RCRA]) Liners & Leak Detection Systems for Hazardous Waste Land Disposal Units (57 FR 3462 on January 29, 1992),

5. Checklist 102 (HSWA), Second Correction to Third Third Land Disposal Restrictions (57 FR 8086 on March 6, 1992),

6. Checklist 103 (HSWA), Hazardous Debris/Case by Case Capacity Variance (57 FR 20766 on May 15, 1992), and

7. Checklist 106 (HSWA), Lead Bearing Hazardous Materials/Case by Case Capacity Variance (57 FR 28628 on June 29, 1992).

The regulations EPA promulgates under HSWA authority are effective in all states on their federal effective date. At this time, the above HSWA regulations are effective in Minnesota under federal authority. The RCRA regulations take effect in Minnesota, an authorized state, at the earlier of either the State's adoption effective date, or two years after the federal effective date. Adopting the regulations into Minnesota Rules shifts the primary enforcement authority to the State.

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II. STATEMENT OF AGENCY'S STATUTORY AUTHORITY

The MPCA's statutory authority to adopt the rules is set forth in Minnesota Statutes, section 116.07, subdivision 4, 5th paragraph, which states:

"Pursuant to chapter 14, the pollution control agency may adopt, amend, and rescind rules and standards having the force of law relating to any purpose within the provisions of this chapter for generators of hazardous waste, the management, identification, labeling, classification, storage, collection, treatment, transportation, processing and disposal of hazardous waste and the location of hazardous waste facilities. A rule or standard may be of general application throughout the state or may be limited as to time, places, circumstances or conditions. In implementing its hazardous waste rules, the pollution control agency shall give high priority to providing planning and technical assistance to hazardous waste generators. The agency shall assist generators in investigating the availability and feasibility of both interim and long-term hazardous waste management methods. The methods shall include waste reduction, waste separation, waste processing, resource recovery, and temporary storage."

Under this statute the MPCA has the necessary statutory authority to adopt the proposed rules.

III. STATEMENT OF NEED

Minnesota Statutes chapter 14 requires the MPCA to make an affirmative presentation of facts establishing the need for and reasonableness of the rules as 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 the MPCA is appropriate. The need for the rules is discussed below.

The need to adopt these federal regulations into state rules is based in the federal RCRA and HSWA laws. These acts empowered the EPA to promulgate federal hazardous waste program regulations, and to sanction (authorize) individual state programs that are equivalent (meaning at least as restrictive and broad in scope).

The MPCA's program closely follows the federal program. The MPCA applied for and received EPA authorization to administer its hazardous waste program as equivalent to the federal program.

Program authorization allows the EPA to shift its resources from enforcing its program over a similar state program, to directly supporting the equivalent state program. This also enhances coordination of enforcement activities.

In order to maintain its authorization, the MPCA must adopt certain federal provisions within specified timeframes. The EPA requires the MPCA to adopt those changes to the federal program which increase program stringency.

IV. STATEMENT OF REASONABLENESS

The MPCA is required by Minnesota Statutes chapter 14 to make an affirmative presentation of facts establishing the reasonableness of the proposed rules. Reasonableness is the opposite of arbitrariness

or capriciousness. It means that there is a rational basis for the Agency's proposed action. The general and specific rationale for the proposed rules is discussed below.

A. Reasonableness of the Rules as a Whole

The EPA followed the federal process for promulgating these regulations. This process included establishing the need, reasonableness, and impacts for the provisions and publishing its presentation of facts in the Federal Register for public comment.

Since the MPCA is adopting these federal regulations without substantive changes, the MPCA reasonably adopts the corresponding federal opinions of need and reasonableness. See the Federal Registers listed in part X for the federal presentation of facts for each regulation. These Federal Registers are available for review at the MPCA or through local libraries.

Minor modifications to federal language which make it appropriate in the context of Minnesota Rules are reasonable in order to make the rule clear and understandable. It also is reasonable to resequence components of the Minnesota Rules to accommodate the insertion of new components in order to maintain the correlation with the corresponding federal regulation.

The MPCA adds its own opinions of need and reasonableness and intends these rules to remain effective in Minnesota until revoked by the State--regardless of the fate of the federal regulations.

The MPCA occasionally "incorporates" or "adopts" certain provisions or procedures by reference as allowed under Minnesota Statutes, section 14.07, subdivision 4. "Incorporations" require

certain procedures and approval by the Minnesota Office of the Revisor of Statutes. "Adoptions" are limited to commonly available bodies of text such as state or federal laws and do not require Revisor's approval. The MPCA believes that both adoption and incorporations by reference are reasonable in cases of relatively narrow applicability, and relatively large or incongruent bodies of text, especially when adopting provisions which are already in effect in the State, as this allows the regulated community to continue under the same regulatory language when the MPCA has chosen to be equivalent.

B. Reasonableness of Individual Rules

The following discussion addresses each rule. This lengthy section is organized first by checklist number and then by Minnesota Rules part.

1. Checklist 81 (HSPA), Petroleum Refinery Primary & Secondary Oil/Water/Solids Separation Sludge Listings (55 FR 46354 on December 17, 1991). [Note: See the revision to Checklist 81 in Checklist 89 below].

MINN. RULES PT. 7045.0135 LISTS OF HAZARDOUS WASTES. In subpart 2, new items Z and AA, the MPCA lists and describes waste codes F037 and F038 which are primary and secondary refinery oil/water/solids separation sludges. In new subpart 2a, item A, the MPCA adopts a paragraph defining oil/water/solids for the purposes of these provisions. In new item B, subitem (1), the MPCA adopts language defining aggressive biological treatment. In new subitem (2) the MPCA adopts provisions requiring proof that sludges are exempt

from the listing due to aggressive biological treatment. In new item C, the MPCA adopts provisions defining when sludges and floats are generated relative to the listings.

It is reasonable to define and list petroleum refinery primary oil/water/solids separation sludge (F037) and petroleum refinery secondary (emulsified) oil/water/solids separation sludge (F038) as hazardous waste when they contain significant toxic hazardous compounds. It is also reasonable to define unique terms within this provision to provide clarity. Finally, it is reasonable to require proof of exemption from listing to assure that the material qualifies for the exemption.

MINN. RULES PT. 7045.0139 BASIS FOR LISTING HAZARDOUS WASTE. In subpart 2, item A, new subitems (23) and (24) are added for waste codes F037 and F038 respectively to provide the chemical constituent basis for listing these wastes as hazardous in part 7045.0135.

It is reasonable to show the basis for listing classes of wastes as hazardous so that handlers know the hazards and so alternatives can be determined.

2. Checklist 89 (HSPA), Revision to the (Checklist 81) Petroleum Refinery Primary & Secondary Oil/Water/Solids Separation Sludge Listings (F037 and F038) (56 FR 21955 on May 13, 1991).

MINN. RULES PT. 7045.0135 LISTS OF HAZARDOUS WASTES. In subpart 2, items Z and AA from Checklist 81 above, the MPCA adopts amendments to the listings, as recommended by EPA in response to comments on its Checklist 81 regulations, which 1) excludes from the

F037 and F038 listings non-contact, once-through cooling waters, and 2) excludes from F038 listing floats generated in or after aggressive biological treatment units.

Checklist 89 reasonably reduces unanticipated effects of the original Checklist 81 listing. It is reasonable to exclude once-through, non-contact cooling water from F037 and F038 listings, and to exclude floats generated in or after aggressive biological treatment units from the scope of the F038 listing as they do not normally exhibit the characteristics of other F037 and F038 wastes.

Also, since the MPCA had not yet adopted Checklist 81, and since the EPA strongly encourages adopting Checklists 81 and 89 as a package, in order to achieve the EPA's intended level of regulation, the MPCA believes it is reasonable to treat these checklists as a single set of provisions with an increased level of overall stringency.

3. Checklist 95 (HSPA) Land Disposal Restrictions for Electric Arc Furnace Dust (56 FR 41164 on August 19, 1991),

MINN. RULES PT. 7045.0214 EVALUATION OF WASTES. In subpart 3, new item E, the MPCA adopts a provision which excludes as hazardous waste certain nonwastewater residues resulting from high temperature metals recovery (HTMR) processing of K061 waste.

MINN. RULES PT. 7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND RECLAMATION. In existing subpart 4, new item K, the MPCA adopts a provision which excludes as solid waste nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units.

MINN. RULES PT. 7045.1355 TREATMENT STANDARDS EXPRESSED AS CONCENTRATIONS IN WASTE EXTRACT. In existing subpart 1, the MPCA adopted 40 CFR Part 268.41, Table CCWE by reference, prospectively. The Minnesota Rules will automatically follow the amendments to these federal provisions on their effective dates unless and until the MPCA specifically provides exceptions in the Minnesota Rules. In existing subpart 2, the MPCA adopts amendments to the provision which require meeting treatment standards for high zinc K061 wastes for mixtures of high and low zinc nonwastewater K061 coded wastes.

MINN. RULES PT. 7045.1360 TREATMENT STANDARDS EXPRESSED AS SPECIFIED TECHNOLOGIES. In existing subpart 4, the MPCA adopted 40 CFR Part 268.42, Table 2 by reference, prospectively. The Minnesota Rules will automatically follow the amendments to these federal provisions on their effective dates unless and until the MPCA specifically provides exceptions in the Minnesota Rules.

These provisions reasonably exclude as hazardous waste those slags from HTMR processes which do not test hazardous on analysis. These provisions also reasonably provide a generic exclusion from the "derived from" rule for HTMR nonwastewater slag residues generated from processing K061 wastes meeting designated concentration levels and disposed of in a subtitle D landfill when they exhibit no characteristics of hazardous waste. Finally, these provisions reasonably provide a conditional exclusion from classification as a solid waste for K061 HTMR splash condenser dross residue provided it is shipped in drums (if processed off site) and provided that it is not land disposed at any point before recovery occurs.

4. Checklist 100 (HSWA) Liners & Leak Detection Systems for Hazardous Waste Land Disposal Units (57 FR 3462 on January 29, 1992), MINN. RULES PT. 7045.0020 DEFINITIONS. The MPCA adopts, in new subparts 10a, 22b, and 73e, the federal provisions defining the terms "construction commences", "existing facility", and "replacement unit", respectively. In existing subpart 87a, the MPCA adopts federal amendments to the definition of the term "sump."

It is reasonable to define terms provided specific meanings within rules to provide clarity. Note that the term "construction commences" is contained within the federal definition of "existing facility." These definitions have been reasonably separated to fit the format of the Minnesota Rules while retaining cross-references to each other. Also, note that these two definitions (subparts 10a and 22b) are not from Checklist 100, however, adopting the federal definitions with Checklist 100 is reasonable because they are used in several Checklist 100 provisions and adopting them adds clarity.

MINN. RULES PT. 7045.0452 GENERAL FACILITY STANDARDS. In subpart 5, item C, the MPCA adopts the federal correction of an earlier oversight by adding requirements to inspect hazardous waste tanks, and by removing two erroneous cross-references previously adopted. It is reasonable to make these corrections to make the state rules correct and consistent with the intent of the original regulation.

MINN. RULES PT. 7045.0461 CONSTRUCTION QUALITY ASSURANCE PROGRAM. In new part 7045.0461, the MPCA adopts the federal provisions requiring permitted treatment, storage, or disposal facilities to have a construction quality assurance program (CQA) for

all new hazardous waste landfills, surface impoundments, and waste piles, and replacements and lateral expansions of such units, to the extent they are affected by the double liner system and leak detection system requirements also in Checklist 100. The CQA provisions also apply to units built under variances granted for the above listed facilities (interim status facilities included).

For the CQA program, subpart 1 addresses the applicability of CQA. Subpart 2 addresses the written CQA plan. Subpart 3 addresses the content of a qualified CQA program. And subpart 4 addresses certification that the approved CQA plan has been successfully completed and that the unit meets the requirements for the type of facility and the terms of the facility hazardous waste permit.

Adopting these provisions is reasonable because the EPA determined, and the MPCA concurs, that CQA is integral to ensure the proper construction, operation, and design of double liner and leak detection systems and the closure of land disposal units. The CQA requirements being issued reasonably incorporate standard engineering practices and common hazardous waste management industry practices that have already been proven to ensure that the design and performance standards of the Checklist 100 provisions are met. The CQA requirements apply to foundations, dikes, low-permeability soil liners, geomembranes, leachate collection and removal systems, leak detection systems, and final covers.

MINN. RULES PT. 7045.0478 OPERATING RECORD. In subpart 3, item H, the MPCA adopts the federal references to the CQA, and corrects erroneous cross-references previously adopted. It is reasonable to

require records of operation to allow enforcement agencies to track facility activities with respect to the CQA program. The corrections are reasonable to make the state rules consistent with the intent of the original regulation.

MINN. RULES PT. 7045.0532 SURFACE IMPOUNDMENTS. In subpart 3, item C, the MPCA adopts the expanded federal design and operating requirements for new, expanded, or replacement surface impoundments. This includes two or more liners (including a composite bottom liner--made of a geomembrane and a 3-foot thick compacted soil material with a specified maximum hydraulic conductivity) and a leachate collection system (capable of leak detection, collection, and removal) between the liners. Adopting these provisions is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks.

In item H, the MPCA adopts the federal amendment which provides conditions for an existing alternative design and operating practices provision for surface impoundments. It is reasonable to provide conditions for alternative design and operating practices so those seeking alternatives know what is expected.

In item J, the MPCA adopts federal provisions exempting replacement surface impoundment units from item C of this subpart if the existing unit was constructed in compliance with applicable federal design standards and if there is no reason to believe that the liner is malfunctioning. This reasonably allows existing liners and construction which is performing adequately to continue performing.

In new subpart 4a, the MPCA adopts the federal "action leakage rate" provisions for surface impoundment units. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The commissioner must approve this action leakage rate for each unit subject to subpart 3, items C or H. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In new subpart 4b, the MPCA adopts the federal "response actions" provisions for surface impoundments. This is a plan, subject to MPCA approval, which prescribes minimum required response actions for the owner or operator of a unit when the action leakage rate is exceeded. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In subpart 5, new item E, the MPCA adopts the federal "leak detection system sump monitoring" provisions for surface impoundments. This provision requires those owners or operators required to have a leak detection system to record the amount of liquids removed from each system sump at prescribed intervals during the active life and closure period; based on whether the final cover is installed, and whether the leak detection sump operating level is exceeded. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

In subpart 7, item B, the MPCA adopts new subitem (2), the federal provisions requiring maintenance and monitoring of the leak detection system for surface impoundments during closure and post-closure care, and redesignates existing subitems (2), (3) and (4) as subitems (3), (4) and (5). It is reasonable to require that the leak detection system is monitored and maintained during closure and post-closure to assure the system continues to perform its function as long as the hazard remains. It is reasonable to redesignate subitems to stay consistent with the order of the federal regulation, thereby adding clarity.

MINN. RULES. PT. 7045.0534 WASTE PILES. In subpart 3, the MPCA adopts new federal language into items C, D and E. Item C contains the federal provisions requiring owners or operators of new, expanded, and replaced waste pile units to install two or more liners (including a composite bottom liner--made of a geomembrane and a 3-foot thick compacted soil material with a specified maximum hydraulic conductivity) and a leachate collection system (capable of leak detection, collection, and removal) as specified, above and between the liners. As with surface impoundments, adopting these provisions for waste piles is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks.

Item D contains the federal provisions allowing and providing conditions for the commissioner to approve alternative design or operating practices to those prescribed in item C when specified conditions are met. It is reasonable to allow the pursuit of

alternative designs and operating practices so more cost effective systems can be utilized. It is reasonable to provide conditions for alternative designs and operating practices so those seeking alternatives know what is expected.

Item E contains the federal provisions exempting owners or operators from the conditions of item C for existing units built in compliance with applicable federal design standards and when there is no reason to believe the liner is malfunctioning. This reasonably allows existing liners and construction which is performing adequately to continue performing.

In new subpart 4a, the MPCA adopts the federal "action leakage rate" provisions for waste pile units. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The commissioner must approve this action leakage rate for each unit it applies to. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In new subpart 5a, the MPCA adopts the federal "response actions" provisions for waste pile units. These provisions require the owner or operator of waste piles, subject to subpart 3, items C or D above, to have an MPCA approved response action plan prior to receiving waste. The plan must set forth procedures for the owner or operator of a unit to follow, including minimum prescribed response actions, when the action leakage rate is exceeded. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In subpart 6, new item C, the MPCA adopts the federal (leak detection sump system) monitoring and inspection provisions for waste piles. These provisions require recording of the amount of liquids removed from each leak detection system sump at least weekly during the active life and closure period for waste pile units subject to subpart 3, item C. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

MINN. RULES PT. 7045.0538 LANDFILLS. The MPCA adopts federal provisions revising the title of subpart 3, revising items C and K, and adopting new item M. The title of subpart 3 is revised from reading "Design and Operation" to "Design and Operating Requirements." This is reasonable to provide clarity that this subpart corresponds with its federal counterpart.

Item C is revised to include the expanded federal design and operating requirements for owners or operators of new, laterally expanded, or replaced landfill units. This includes two or more liners (including a composite bottom liner--made of a geomembrane and a 3-foot thick compacted soil material with a specified maximum hydraulic conductivity) and a leachate collection system (capable of leak detection, collection, and removal) above and between the liners. Adopting these provisions is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks.

In item K, the MPCA adopts the federal provision amending an existing alternative design and operating practices provision for landfills. This amendment provides conditions under which the commissioner may approve alternative design or operating practices to

those prescribed in item C. It is reasonable to provide conditions for alternative design and operating practices so those seeking alternatives know what is expected.

In new item M, the MPCA adopts federal provisions exempting owners or operators of replacement surface impoundment units from item C of this subpart if the existing unit was constructed in compliance with applicable federal design standards and when there is no reason to believe that the liner is malfunctioning. This reasonably allows existing liners and construction which is performing adequately to continue performing.

In new subpart 4a, the MPCA adopts the federal "action leakage rate" provisions for landfill units subject to subpart 3, items C or K above; the action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot, to be determined as specified. The commissioner must approve this action leakage rate for each unit. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In subpart 5, new item C, the MPCA adopts the federal (leak detection sump system) monitoring and inspection provisions for landfills. These provisions require those owners or operators required to have a leak detection system to record the amount of liquids removed from each system sump at prescribed intervals during the active life and closure period; based on whether the final cover is installed, and whether the leak detection sump operating level is exceeded. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

In new subpart 5a, the MPCA adopts the federal "response actions" provisions for landfill units. This is a plan, subject to MPCA approval, which prescribes minimum required response actions for the owner or operator of a unit when the action leakage rate is exceeded. The plan must be approved prior to receiving waste at the unit. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In subpart 7, item B, new subitem (4), the MPCA adopts the federal provisions requiring that owners and operators of closing and closed landfill units must maintain and monitor the leak detection system as prescribed. The MPCA also redesignates existing subitems (5), (6) and (7) as subitems (6), (7) and (8). It is reasonable to require that the leak detection system is monitored and maintained during closure and post-closure to assure the system continues to perform its function as long as the hazard remains. It is reasonable to redesignate subitems to stay consistent with the order of the federal regulation, thereby adding clarity.

MINN. RULES PT. 7045.0556 GENERAL FACILITY STANDARDS [INTERIM STATUS STANDARDS]. As in part 7045.0461 for permitted facilities, in new subpart 8, item A, the MPCA adopts federal provisions requiring treatment, storage, or disposal facilities with an interim status permit to have a construction quality assurance (CQA) program for all new hazardous waste landfills, surface impoundments, and waste piles, and replacements and lateral expansions of such units to the extent

they are affected by the double liner system and leak detection system requirements also in Checklist 100. The CQA provision also applies to units built under variances granted for the above listed facilities (interim status facilities included).

For the subpart 8 CQA provisions, item A addresses applicability of CQA. Item B addresses the written CQA plan. Item C addresses the content of a qualified CQA program. And item D addresses certification that the approved CQA plan has been successfully completed and that the unit meets the requirements for the type of facility and the terms of the facility hazardous waste permit.

Adopting these provisions is reasonable because the EPA determined, and the MPCA concurs, that CQA is integral to ensure the proper construction, operation, and design of double liner and leak detection systems and the closure of land disposal units. The CQA requirements being issued reasonably incorporate standard engineering practices and common hazardous waste management industry practices that have already been proven to ensure that the design and performance standards of the Checklist 100 provisions are met. The CQA requirements apply to foundations, dikes, low-permeability soil liners, geomembranes, leachate collection and removal systems, leak detection systems, and final covers.

MINN. RULES PT. 7045.0584 OPERATING RECORD [INTERIM STATUS FACILITY STANDARDS]. In subpart 3, item H, the MPCA adopts the federal references to the CQA, and corrects erroneous cross-references previously adopted. It is reasonable to require records of operation to allow enforcement agencies to track facility activities with

respect to the CQA program. The corrections are reasonable to make the Minnesota Rules consistent with the intent of the original regulation.

MINN. RULES PT. 7045.0630 SURFACE IMPOUNDMENTS [INTERIM STATUS FACILITY STANDARDS]. The MPCA adopts federal provisions revising the title and the text of subpart 1a and adopting new subparts 2a, 2b, 5, and 6. These provisions relate to part 7045.0532 amendments which address permitted surface impoundments.

The title of subpart 1a is revised from reading "Design requirements" to "Design and Operating Requirements." This is reasonable to provide clarity that this subpart corresponds with its federal counterpart.

The MPCA adopts the expanded federal design and operating requirements for new, expanded, or replacement interim status surface impoundment units. This includes two or more liners and a leachate collection system between the liners. Adopting these provisions is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks. This provision allows the exclusions provided under 7045.0532, subpart 3, items H or J. It is reasonable to provide conditions for alternative design and operating practices so those seeking alternatives know what is expected, and to allow existing liners and construction which is performing adequately to continue performing.

The title of subpart 1a is revised from reading "Design and Operation" to "Design and Operating Requirements." This is reasonable to provide clarity that this subpart corresponds with its federal counterpart.

In new subpart 2a, the MPCA adopts the federal "action leakage rate" provisions for interim status surface impoundment units. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The commissioner must approve this action leakage rate for each unit subject to subpart 1a, item A. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In new subpart 2b, the MPCA adopts the federal "response actions" provisions for interim status surface impoundment units. This is a plan, subject to MPCA approval, which prescribes minimum required response actions for the owner or operator of a unit when the action leakage rate is exceeded. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In subpart 5, the MPCA revises the title from reading "Inspections" to read "Monitoring and Inspection." This is reasonable to provide clarity that this subpart corresponds with the federal counterpart and to describe the new requirement for monitoring. The MPCA redesignates existing subpart 5 language as item A, and existing items A and B as subitems (1) and (2) respectively. It is reasonable to add a layer of hierarchy to accommodate a new item B.

In new item B, the MPCA adopts the federal "leak detection system sump monitoring" provisions for interim status surface impoundments. These provisions require those owners or operators required to have a leak detection system to record the amount of

liquids removed from each system sump at prescribed intervals during the active life and closure period; based on whether the final cover is installed, and whether the leak detection sump operating level is exceeded. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

In subpart 6, the MPCA revises the title from reading "Closure and Post-Closure" to "Closure and Post-Closure Care." This is reasonable to provide clarity that this subpart corresponds with its federal counterpart.

In item D, new subitem (2), the MPCA adopts the federal provisions requiring maintenance and monitoring of the leak detection system for interim status surface impoundments during closure and post-closure care, and redesignates existing subitem (3) as subitem (4). It is reasonable to require that the leak detection system is monitored and maintained during closure and post-closure to assure the system continues to perform its function as long as the hazard remains. It is reasonable to redesignate subitems to stay consistent with the order of the federal regulation, thereby adding clarity.

MINN. RULES PT. 7045.0632 WASTE PILES [INTERIM STATUS FACILITY STANDARDS]. In subpart 4a, the the MPCA revises the title from reading "Design Requirements" to read "Design and Operating Requirements." This is reasonable to provide clarity that this subpart corresponds with its federal counterpart.

As in part 7045.0534, permitted waste piles, the MPCA also revises subpart 4a to include the federal amendments requiring owners or operators of new, expanded, and replaced waste pile units under interim status permits to install two or more liners and a leachate collection system above and between such liners, and to operate the leachate collection and removal systems, in accordance with the design and operating requirements of part 7045.0534, subpart 3, item C, unless exempted under part 7045.0534, subpart 3, items D or E; and also to comply with the notification procedures of part 7045.0630, subpart 1a, item B. Adopting these provisions for waste piles is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks.

Minn. Rules pt. 7045.0534, subpart 3, item D contains the federal provisions allowing and providing conditions for the commissioner to approve alternative design or operating practices to those prescribed in item C when specified conditions are met. It is reasonable to allow the pursuit of alternative designs and operating practices so more cost effective systems can be utilized. It is reasonable to provide conditions for alternative designs and operating practices so those seeking alternatives know what is expected.

Minn. Rules pt. 7045.0534, subpart 3, item E contains the federal provisions exempting owners or operators from the conditions of item C of that part for existing units built in compliance with applicable federal design standards and when there is no reason to believe the liner is malfunctioning. This reasonably allows existing liners and construction which is performing adequately to continue performing.

In new subpart 4b, the MPCA adopts the federal "action leakage rate" provisions for interim status waste pile units. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The commissioner must approve this action leakage rate for each unit it applies to. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In new subpart 8, the MPCA adopts the federal "response actions" provisions for interim status waste pile units; these provisions require the owner or operator of such units subject to subpart 4a of this part to have an MPCA approved response action plan prior to receiving waste. The plan must set forth procedures for the owner or operator of a unit to follow, including minimum prescribed response actions when the action leakage rate is exceeded. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In subpart 9, the MPCA adopts the federal monitoring and inspecting provisions requiring owners or operators required to have a leak detection system under subpart 4a of this part to record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period of interim status waste pile units. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

MINN. RULES PT. 7045.0638 LANDFILLS [INTERIM STATUS FACILITY STANDARDS]. The MPCA adopts expanded federal design and operating requirements for owners or operators of new, laterally expanded, or replaced landfill units, operating under interim status permits, similar to those federal amendments adopted in part 7045.0538 above for fully permitted landfill units.

The MPCA adopts the federal amendments by combining existing subpart 1a, "Design Requirements," with existing subpart 2, "General Operating Requirements." It is reasonable to provide the clarity gained by staying consistent with federal counterparts. It follows that it is reasonable to combine titles from reading "Design requirements" and "General Operating Requirements" to read "Design and Operating Requirements." This reasonably provides clarity as to the subject of the provision and provides consistency with the federal counterpart. It also follows that it is reasonable to repeal now empty subpart 1a.

Subpart 2 is revised to include the expanded federal design and operating requirements for owners or operators of new, laterally expanded, or replaced landfill units. This includes two or more liners and a leachate collection system above and between the liners. Adopting these provisions is reasonable to prevent disastrous leaks and to provide a system to detect and control such potential leaks. This amendment provides conditions under which the commissioner may approve alternative design or operating practices to those prescribed in item C. It is reasonable to provide conditions for alternative design and operating practices so those seeking alternatives know what

is expected. This amendment also exempts owners or operators of replacement surface impoundment units from item A of this subpart if the existing unit was constructed in compliance with applicable federal design standards and when there is no reason to believe that the liner is malfunctioning. This reasonably allows existing liners and construction which is performing adequately to continue performing.

In new subpart 2a, the MPCA adopts the federal "action leakage rate" provisions for interim status landfill units subject to subpart 2. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot, to be determined as specified. The commissioner must approve this action leakage rate for each unit. These provisions are reasonable as they prevent excessive head on the bottom liner which might in turn cause a liner failure.

In new subpart 2b, the MPCA adopts the federal "response actions" provisions for interim status landfill units. This is a plan, subject to MPCA approval, which prescribes minimum required response actions for the owner or operator of a unit when the action leakage rate is exceeded. The plan must be approved prior to receiving waste at the unit. These provisions are reasonable to assure that proper steps are taken to determine the source and to mitigate the excessive flow of liquids into the leak detection system.

In new subpart 2c, the MPCA adopts the federal (leak detection sump system) monitoring and inspection provisions for interim status landfill units. These provisions require those owners or operators required to have a leak detection system to record the amount of

liquids removed from each system sump at prescribed intervals during the active life and closure period; based on whether the final cover is installed, and whether the leak detection sump operating level is exceeded. It is reasonable to require monitoring to assure the integrity of such units, whether active or closed.

In subpart 4, item B, new subitem (2), the MPCA adopts the federal provisions requiring that owners and operators of closing and closed landfill units must maintain and monitor the leak detection system as prescribed. The MPCA also redesignates existing subitems (2), (3) and (4) as subitems (3), (4) and (5). It is reasonable to require that the leak detection system is monitored and maintained during closure and post-closure to assure the system continues to perform its function as long as the hazard remains. It is reasonable to redesignate subitems to stay consistent with the order of the federal regulation, thereby adding clarity.

MINN. RULES PT. 7001.0150 TERMS AND CONDITIONS OF PERMITS. In subpart 3, item P, the MPCA adopts federal amendments to the conditions which must be included in a permit. Specifically, this amendment states that compliance with a RCRA permit constitutes compliance with RCRA except for requirements not included in the permit which become effective by statute, are part of land disposal restrictions, or are part of the leak detection system requirements. It is reasonable to declare what is covered by the permit and what compliance with the permit means to provide clarity to the regulated community.

MINN. RULES PT. 7001.0590 PART B INFORMATION REQUIREMENTS FOR SURFACE IMPOUNDMENTS. In items C and D, the MPCA adopts several federal amendments clarifying language. This is reasonable to provide clearer understanding to the reader. In item C, the MPCA also adopts federal amendments adding requirements for detailed plans and an engineering report addressing the following items when applicable: leak detection and double liner system (also requiring appropriate information if an exemption or alternative system is sought), leak detection system in a saturated zone, a quality assurance plan, a proposed action leakage rate, and a response action plan. In item D, the MPCA adopts the federal provision requiring a plan for the monitoring of the leak detection and leachate removal system for inclusion in the facility inspection plan. It is reasonable to require detailed plans and engineering reports covering these new provisions in a part B permit application since the MPCA must verify that the owner or operator understands and intends to comply with the new requirements.

MINN. RULES PT. 7001.0600 PART B INFORMATION REQUIREMENTS FOR WASTE PILES. In items D and G, the MPCA adopts several federal amendments clarifying language. This is reasonable to provide clearer understanding to the reader. In item D, the MPCA also adopts federal amendments adding requirements for detailed plans and an engineering report addressing the following items when applicable: leak detection and double liner system (also requiring appropriate information if an exemption or alternative system is sought), leak detection system in a saturated zone, a quality assurance plan, a

proposed action leakage rate, and a response action plan. In item G, the MPCA adopts the federal provision requiring a plan for the monitoring of the leak detection and leachate removal system for inclusion in the facility inspection plan. It is reasonable to require detailed plans and engineering reports covering these new provisions in a part B permit application since the MPCA must verify that the owner or operator understands and intends to comply with the new requirements.

MINN. RULES PT. 7001.0620 PART B INFORMATION REQUIREMENTS FOR LANDFILLS. In items C and D, the MPCA adopts several federal amendments clarifying language. This is reasonable to provide clearer understanding to the reader. In item C, the MPCA also adopts federal amendments adding requirements for detailed plans and an engineering report addressing the following items when applicable: leak detection and double liner system (also requiring appropriate information if an exemption or alternative system is sought), leak detection system in a saturated zone, a quality assurance plan, a proposed action leakage rate, and a response action plan. In item D, the MPCA adopts the federal provision requiring a plan for the monitoring of the leak detection and leachate removal system for inclusion in the facility inspection plan. It is reasonable to require detailed plans and engineering reports covering these new provisions in a part B permit application since the MPCA must verify that the owner or operator understands and intends to comply with the new requirements.

5. Checklist 102 (RCRA), Second Correction to Third Third Land Disposal Restrictions (57 FR 8086 on March 6, 1992, corrects and clarifies EPA RCRA Checklists 78 and 83),

The EPA strongly encourages states such as Minnesota which have adopted the related EPA Revision Checklist 78 and 83 provisions to adopt these Checklist 102 changes as soon as possible. Generally, adopting these federal amendments is reasonable to assure compatibility between state and federal programs and to improve clarity for the regulated community.

MINN. RULES PT. 7045.0458 WASTE ANALYSIS REQUIREMENTS. Existing subpart 1, item A is equivalent to the corrected federal provision--no change needed.

MINN. RULES PT. 7045.0564 WASTE ANALYSIS REQUIREMENTS. Existing subpart 1, item A is equivalent to the corrected federal provision--no change needed.

MINN. RULES PT. 7045.1305 DILUTION PROHIBITED AS A SUBSTITUTE FOR TREATMENT. In item B, the MPCA adopts the amended provision which prohibits dilution of D003 reactive cyanide wastewaters whose ultimate discharges are subject to regulation under sections 402 or 307 of the Clean Water Act (CWA).

This reasonably corrects an inadvertently omitted prohibition on dilution for reactive cyanide wastewaters that are treated in systems whose ultimate discharges are subject to regulation under the CWA. The error results from EPA's drafting of 40 CFR, section 268.3(b), an exception from the dilution prohibition for characteristic wastes treated in systems whose discharges are subject to CWA regulation.

The exception does not, however, apply to wastes for which "a method has been specified as the treatment standard." Since the reactive cyanide standards are levels rather than methods, this limitation on the exclusion would not apply and dilution of D003 reactive cyanide wastewaters would be allowed in CWA treatment systems. This is the opposite result EPA proposed and intended, as stated in the preambles. Therefore, EPA amended 40 CFR, section 268.3(b) to indicate that the treatment standard for reactive cyanide wastes cannot be achieved through dilution as a substitute for adequate treatment under any circumstance. This fits with EPA's expressly stated intent that reactive cyanide contains obvious toxic characteristic constituents for which dilution would not be an appropriate method of treatment (see 55 FR 22666, col. 1, and 54 FR 48426, col. 2). The EPA standards for reactive cyanide wastewaters and nonwastewaters are found in 40 CFR, section 268.43(a) Table CCW (from 55 FR 22701).

MINN. RULES PT. 7045.1355 TREATMENT STANDARDS EXPRESSED AS CONCENTRATIONS IN WASTE EXTRACT. In subpart 1, the MPCA adopts EPA corrections and clarifying revisions.

The provision reasonably corrects a list of exceptions to restricted wastes as follows: 1) EPA waste code K031 is replaced with the intended code D031, 2) an errant EPA waste code P038 is removed, and 3) a redundant listing is removed to clarify the paragraph. Also, the provision corrects an inadvertent error by reasonably clarifying the intent that where treatment standards are based on grab sampling, enforcement is based on grab samples; and where treatment standards are based on composite sampling, enforcement is also based on composite samples.

MINN. RULES PT. 7045.1360 TREATMENT STANDARDS EXPRESSED AS SPECIFIED TECHNOLOGIES. This provision clarifies that the dilution prohibition applies to reactive sulfide wastes.

This is reasonable to prohibit dilution due to the toxic characteristic of reactive sulfide wastes. The MPCA adopted 40 CFR Part 268.42, Table 2 by reference, prospectively. The state rules will automatically follow the amendments to these federal provisions on their effective dates unless and until the MPCA specifically provides exceptions in the state rules. It is reasonable to allow the state rules to follow this federal clarification to prevent dilution of this otherwise toxic hazardous waste.

6. Checklist 103 (RCRA) Hazardous Debris/Case by Case Capacity Variance (57 FR 20766 on May 15, 1992), and

MINN. RULES PT. 7045.1335 WASTE SPECIFIC PROHIBITIONS, THIRD ONE-THIRD OF REGULATED WASTES. In subpart 5, the MPCA adopts the federal provision which extends the Land Disposal Restrictions (LDR) effective date from May 8, 1992 to May 8, 1993 for certain hazardous waste debris based on a national capacity variance (lack of capacity in facilities nationwide). This extension includes more types of debris than were granted the national capacity extension in the Third Third LDR rules promulgated June 1, 1990 (55 FR 22520). Originally, only inorganic solid debris and other debris contaminated with a waste whose treatment standard was based on incineration, mercury retorting, or vitrification received a variance. Debris not covered by this variance includes debris contaminated with listed solvent or dioxin waste covered by the RCRA Section 3004(e) prohibition and debris

contaminated with non-liquid "California List Wastes" pursuant to RCRA section 3004(d) because the limit for granting national and case-by-case capacity extensions for these wastes has expired.

This reasonably recognizes and follows EPA's determination, subsequent to comments and studies, that the national capacity to handle these debris was exceeded and that a variance was in order. (Note that the variance has now expired, but should be reflected in Minnesota Rules for compliance tracking purposes).

7. Checklist 106 (HSWA and RCRA) Lead Bearing Hazardous Materials/Case by Case Capacity Variance (57 FR 28628 on June 29, 1992).

MINN. RULES PT. 7045.1335 WASTE SPECIFIC PROHIBITIONS, THIRD ONE-THIRD OF REGULATED WASTES. In subpart 3, item E, and subpart 11, the MPCA adopts the federal provision for a 1-year extension (until May 8, 1993) to the LDR effective date for owners and operators of secondary lead smelters who are engaged in the reclamation of lead-bearing hazardous materials. (Note that the variance has now expired, but should be reflected in Minnesota Rules for compliance tracking purposes).

The EPA encourages states such as Minnesota that have adopted the related EPA Revision Checklist 78 and 83 provisions to adopt this Checklist 106 extension as soon as possible. It is reasonable to follow EPA's case-by-case extension of the variance to comply with land disposal restrictions because the EPA believes that the continued storage of these lead-bearing hazardous materials in piles at smelting facilities prior to recovery is preferable to any alternative management available and is consistent with waste minimization goals.

Also, it would be infeasible as a practical matter for regulated parties to design and construct the capacity to store the materials properly--especially since there are proposed EPA rules pending which will provide the final approach to storing these materials. This extension applies only to lead-bearing hazardous wastes placed in a staging area immediately prior to being introduced into a lead smelter. This extension to the LDR effective date is appropriate and consistent with the overall objective of encouraging recycling.

V. SMALL BUSINESS CONSIDERATIONS IN RULEMAKING

Minnesota Statutes, section 14.115, subdivision 2, requires the MPCA, when proposing rules or rule amendments which may affect small businesses, to consider methods for reducing the impact on small businesses.

Generally, adopting these federal rules and rule amendments may increase costs to business by requiring proper hazardous waste management. The EPA determined that this level of regulation is necessary and so it promulgated these rules. The EPA followed public rulemaking procedures which included notices, comment opportunities, and consideration of economic factors to promulgate these regulations.

Nearly all of these federal provisions were promulgated under the authority of the federal Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act. Such provisions are already effective in all states under federal authority on their federal effective dates. The state's assumption of primary enforcement authority will not change their applicability to the regulated community.

These rules make no special provision for the management of wastes by small business. While most of the businesses affected are not small, the size of a business is not directly related to the degree of risk presented if its wastes are mismanaged. The MPCA cannot provide less stringent regulation than is provided under the federal program and maintain its program authorization. Finally, these rules provide reasonable conditions for managing waste and less stringent rules may be environmentally irresponsible.

VI. CONSIDERATION OF ECONOMIC FACTORS

In exercising its powers, the MPCA is required by Minnesota Statutes, section 116.07, subdivision 6, to give due consideration to economic factors. The statute provides:

In exercising all its powers the MPCA 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 EPA promulgated these provisions under the federal process for promulgating regulations. The EPA considered the economic impact under the federal rule promulgation process. The EPA determined these provisions to be necessary and reasonable in order to protect human health and the environment. Since most of these provisions were promulgated under HSWA and are already in effect in Minnesota, there

will be no significant increase in numbers of regulated community, level of regulation, or economic impacts as a result of the MPCA adopting existing federal requirements.

VII. IMPACT ON AGRICULTURAL LANDS AND FARMING OPERATIONS

Minnesota Statutes, section 14.11, subdivision 2, requires that if the agency proposing rules determines that the rules may have a direct and substantial adverse impact on agricultural land in the state, that agency must comply with specified additional requirements. Adopting these federal provisions will have no direct and substantial adverse impact on agricultural land in the state.

VIII. COSTS TO LOCAL PUBLIC BODIES

Minnesota Statutes, section 14.11, subdivision 1, requires the agency to include a statement of the rule's estimated costs to local public bodies in the notice of intent to adopt rules if the rule would have a total cost of over \$100,000 to all local bodies in the state in either of the two years immediately following adoption of the rule. Adopting these federal provisions will not add over \$100,000 per year in the first two years to costs for local public bodies.

IX. CONCLUSION

The MPCA 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 MPCA's Statement of Need and Reasonableness for the proposed amendments to Minnesota's hazardous waste rules.

X. LIST OF EXHIBITS

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

- | MPCA Ex. No. | Title |
|--------------|--|
| 1. | Volume 55, <u>Federal Register</u> , page 46354 (55 FR 46354) published on December 17, 1991, Petroleum Refinery Primary & Secondary Oil/Water/Solid Separation Sludge Listings (and EPA Revision Checklist 81), |
| 2. | 56 FR 21955 on May 13, 1991, Revision to F037 and F038 Listings (and EPA Revision Checklist 89), |
| 3. | 56 FR 41164 on August 19, 1991, Land Disposal Restrictions for Electric Arc Furnace Dust (and EPA Revision Checklist 95), |
| 4. | 57 FR 3462 on January 29, 1992, Liners & Leak Detection Systems for Hazardous Waste Land Disposal Units (and EPA Revision Checklist 100), |
| 5. | 57 FR 8086 on March 6, 1992, Second Correction to Third third Land Disposal Restrictions (and EPA Revision Checklist 102), |
| 6. | 57 FR 20766 on May 15, 1992, Hazardous Debris/Case by Case Capacity Variance (and EPA Revision Checklist 103), and |
| 7. | 57 FR 28628 on June 29, 1992, Lead Bearing Hazardous Materials/Case by Case Capacity Variance (and EPA Revision Checklist 106). |

Date: July 26, 1993

for Ann Hume
Charles W. Williams
Commissioner