STATE OF MINNESOTA

POLLUTION CONTROL AGENCY

In the matter of the Proposed Rules Governing Performance Testing, Minn. Rules Part 7005.0100 - 7005.0116 General Provisions, Parts 7005.0360 to 7005.2920 Standards of Performance and Part 7005.1860 Performance Tests.

STATEMENT OF NEED AND REASONABLENESS

I. INTRODUCTION

The Minnesota Pollution Control Agency (MPCA) is proposing to adopt amendments to rules governing performance testing, Minn. Rules pt. 7005.0100 to 7005.0116 General Provisions, pts. 7005.0360 to 7005.2920 Standards of Performance and pt. 7005.1860 Performance Tests.

Performance tests are an important means of determining compliance with the emission limits set out in a permit or other compliance document, federal regulation, Minnesota rule or statute, and of characterizing those emissions. The MPCA is proposing to amend the rules because current performance test requirements are contained in several different rules and documents and there are inconsistencies between them.

The current rules do not reflect the introduction of new or improved test methods in recent years. The current general rule for performance test requirements, pt. 7005.1860, was promulgated in 1976 as APC 21 and has been subject to only a few minor changes since that time. The rules will be revised to reflect the increased number of regulated pollutants and the range of test methods that are available for performance testing.

The MPCA is proposing that the sections of individual performance standards for stationary sources in chapter 7005 that relate to performance testing be amended to include a reference to the proposed pts. 7017.2000 to 7017.2060 so

that the quality assurance and procedural requirements of the proposed parts will be followed for those performance tests, as for any other performance test. This will not affect the emission limits on which those standards are based, but will provide uniform procedures for conducting performance tests.

On April 27, 1992, the MPCA published a Notice of Intent to Solicit Outside Information in preparing proposed amendments to the rules. The notice generated questions and interest in participating in a Technical Advisory Committee (TAC) or being included in the mailing list for the draft rule, but no comments were received.

The MPCA assembled a TAC to assist it in the development of this rule. The TAC was made up of representatives from industry, consulting firms and MPCA staff. Meetings were held on August 5, 1992, and October 22, 1992. The TAC reviewed various drafts of the rule as it evolved. All aspects of the rule were discussed and written or verbal comments were taken outside of the TAC meetings. Many decisions were made based on the discussions in these meetings.

II. STATEMENT OF AGENCY'S STATUTORY AUTHORITY

The Agency's statutory authority to adopt the rules is set forth in Minn. Stat. §116.07, subd. 4 (1992). It provides:

> Pursuant and subject to the provisions of chapter 14, and the provisions hereof, 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 Laws 1969, ch. 1046, for the prevention, abatement, or control of air pollution. Any such rule or standard may be of general application throughout the state, or may be limited as to times, places, circumstances, or conditions in order to make due allowance for variations therein. Without limitation, rules or standards may relate to sources or emissions of air contamination or air pollution, to the quality or composition of such emissions, or to the quality of or composition of the ambient air or outdoor atmosphere or to any other matter relevant to the prevention, abatement or control of air pollution.

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

III. STATEMENT OF NEED

Minn. Stat. §§14.14, subd. 2, and 14.23 (1992) require the MPCA to make an affirmative presentation of facts establishing the need for and the reasonableness of the proposed amended rules. In general terms, this means that the MPCA must set forth the reasons for proposing rules 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 a proper one. The need for the amended rules is discussed below.

The need for these rules arises from the following:

1) The need to clarify the MPCA's requirements for performance test procedures. Presently, these requirements are listed in several parts of the rules, in compliance documents and in Exhibit C, a document that contains guidelines for conducting performance tests and submitting results. A copy of Exhibit C is attached to permits on issuance and given out at pretest meetings between MPCA staff and representatives of the regulated company. Exhibit C has been updated periodically so the testing requirements can vary depending on the date of issuance of the permit. This has caused confusion in the regulated community and within the Air Quality Division. For example, the existing Minn. Rule pt. 7005.1860, subp. 6, requires the owner or operator of an emission facility to give 30 days notice of testing. However, older versions of Exhibit C require only 15 days. Such inconsistencies make application of standard procedures difficult and time consuming for MPCA staff. Under the proposed rule, much of the content of Exhibit C will be adopted into the rules and will apply uniformly. The proposed rule contains a statement that once the rule takes effect, Exhibit C will no longer apply to existing permits. MPCA staff plan to notify all permitted facilities in writing that Exhibit C will no longer apply.

2) There is a need to replace the existing rule, pt. 7005.1860, for performance test methods and procedures with an updated rule in order to include newly developed test methods, to incorporate any revisions of the methods since the rule was promulgated in 1976, and to clarify the MPCA's requirements. MPCA staff estimate that 30 to 40 performance tests were conducted in 1976. In 1988 approximately 133 performance tests were conducted and the annual figure has increased steadily since then, to about 240 in 1992. This growth is expected to continue as new federal regulations and state standards are developed and the number of permitted facilities increases. As the number of performance tests increases it becomes increasingly important that procedures are formalized in order to ensure that they can be applied uniformly by the increased number of staff involved in administering the MPCA's performance test requirements.

3) The definition of PM10 needs amending to be consistent with the federal definition, expressed in terms of the test methods, which in turn states that condensible particulate matter is included as PM10. The existing definition defines PM10 in terms of particulate matter, which under Minnesota rules (pt. 7005.0100) is defined without specifically including condensible particulate matter. Therefore, a conflict exists between the federal and state definitions that needs to be resolved.

4) In chapter 7005, all of the individual performance standards for stationary sources that contain emission limits for air pollutants include a list of performance test methods and procedures. An emission limit is established, in part, in conjunction with the characteristics of the performance test methods. There is a need therefore to update these requirements to reflect the introduction of new methods and improved technology since 1976 but without affecting the basis of the emission limits in those standards. In future rulemakings, the MPCA will review each standard of performance and make any necessary adjustments to individual test procedures, as well as to the other

parts of each standard. Therefore, the proposed rule is written as a general rule and defers to the original specific requirements of the performance standards while updating procedural requirements for areas not covered in the original standard, such as quality assurance and report submittal requirements.

5) The needs so far identified for updating the rules relating to performance testing also apply to performance tests conducted for the purpose of certifying the accuracy of a continuous emissions monitoring system (CEMS). CEMS certification requirements are currently set out in pt. 7005.1850 and in Exhibit B (attached to permits), both sources requiring expansion and updating. As the reference methods used for this purpose are the same methods used for emissions testing, elements of the proposed rules also should apply to certification of a CEMS. The portion of a CEMS certification that uses these test methods is called the relative accuracy test. In order to ensure that the relative accuracy test is conducted under the required conditions and that the results are valid, certain notification, planning, reporting and data validation procedures are necessary. These procedures are included in the proposed rules. The MPCA plans at a later date to update the rules relating to CEMS and to have those rules supersede Exhibit B, a document that is a part of air emission permits that contain CEMS requirements, in the same way that the rules proposed here will supersede Exhibit C. All CEMS requirements included in the proposed rules are consistent with or supplemental to the existing requirements of pt. 7005.1850 and Exhibit B.

IV. STATEMENT OF REASONABLENESS

The MPCA is required by Minn. Stat. ch. 14 (1992) to make an affirmative presentation of facts establishing the reasonableness of the proposed rules. "Reasonableness" means that there is a rational basis for the MPCA's proposed action. The reasonableness of the rule amendments is discussed below.

A. REASONABLENESS OF THE RULE AS A WHOLE

The following discussion provides an explanation and justification of the provisions of the rule amendments as a whole. The purpose of this section of the Statement is to demonstrate that the amendments are a reasonable approach to meeting the need identified in the Statement of Need.

The MPCA proposes to replace pt. 7005.1860 with the proposed rule by amending and expanding on the existing provisions, incorporating much of current Exhibit C and basing new requirements on current MPCA procedures relating to performance tests. The existing subparts have been renumbered, amended or rewritten as necessary in order to achieve a consistently worded and logically arranged rule. The new rule occupies pts. 7017.2000 to 7017.2060.

The amendments as a whole are reasonable as pt. 7005.1860 does not reflect the introduction of new or improved test methods in recent years. Pt. 7005.1860 was promulgated in 1976, as APC 21, and has been subject to only a few minor changes since then. Most of the methods in Code of Federal Regulations, title 40, part 60, appendix A, which existed in 1976 have been revised or corrected at least once since 1976. Method 5, which measures particulate matter and is the single most frequently used method for performance tests, has been revised five times and corrected once since 1980. New methods for determination of volatile organic compounds and dioxin/dibenzo furan, amongst others, have been added and alternative methods have been promulgated, giving a greater choice of available methods that is not reflected in the current rules.

There has been an approximately five fold increase in the annual number of performance tests since 1976 and the number is expected to increase steadily over the next five years. It is therefore reasonable that the rules be expanded, updated and made more consistent in order to efficiently administrate the increased number of performance tests. The increased amount of staff time

devoted to performance test issues is illustrated by the creation of the Compliance Determination Unit (CDU) of the Air Quality Division (AQD) in 1991. Prior to 1991, performance tests were overseen by one person in the Permit Section in addition to permit writing duties. By 1992 this workload had increased to 3 staff people, all within the CDU.

The proposed rule adds more specific requirements where subparts of 7005.1860 have been incorporated. It reflects current permit template language and compliance and enforcement procedures within the AQD that have developed during the 16 years since the performance test rule was promulgated. When the new parts become rule, Exhibit C will no longer apply to permits and all permitted facilities will be informed in writing that the new rule governs performance test requirements.

It is also proposed that subps. 11, 30a, 35c and 42b of Minn. Rule pt. 7005.0100 be amended so that the definitions reflect the methods that are in use or available for performance testing and which have been improved or expanded since 1976. The definition of PM10 will be more consistent with the federal definition rather than based on the particulate matter definition, which is misleading as federal emission limits for PM10 include condensible particulate matter whereas the state particulate matter definition does not. The changes in the definitions are reasonable as they do not affect any existing emission limits or rules, they update and clarify the definitions, and they are consistent with federal law.

For each standard of performance for stationary sources in chapter 7005 that lists performance test methods and procedures, it is proposed that under the procedures section a reference will be made to pts. 7017.2000 to 7017.2060. This will assist readers of the rule by directing them from the performance standard to the performance test rule. This will also make the general requirements of the new rule applicable except where there are specific method

or procedural requirements in the existing standard. This is reasonable as it makes the additional requirements of the new parts applicable to performance test subject to these standards without affecting the basis of the emission limits in the standards. For example, if the emission limit for particulate matter does not include condensible particulate matter then the determination of compliance will not include condensible particulate matter. It should be noted that the MPCA plans to revise the performance standards in future rulemakings and it is likely that there will be less specific performance test requirements within the standards themselves and increased reference to this proposed rule.

It is reasonable that the requirements of this rule also apply to those performance tests which are conducted for the purpose of completing a relative accuracy test on a CEMS as the same reference methods are used here as are used for emissions compliance testing. Therefore, such requirements as advance notice of testing, submittal of a test plan and test report in the correct format, and quality assurance requirements, are equally applicable as the requirements are based on the complexity and technical aspects of performance tests rather than on the reason for testing. The term "performance test" is defined in the proposed rules to include relative accuracy testing and the term includes relative accuracy tests when used in this Statement of Need and Reasonableness. By making the proposed rule applicable to relative accuracy testing, there will be no need to duplicate the language when the MPCA revises the rules that apply specifically to CEMS. Those rules will reference these proposed rules as necessary. Exhibit B, a part of those air emission permits which contain CEMS requirements, and the existing rules for CEMS will remain in effect but as the proposed rules are consistent with or supplemental to those sources, no inconsistencies will be introduced.

The MPCA assembled a TAC to assist it in the development of this rule. The TAC was made up of representatives from industry, consulting firms and MPCA staff. Meetings were held on August 5, 1992, and October 22, 1992. The committee reviewed various drafts of the rule as it evolved. All aspects of the rule were discussed, and written or verbal comments were taken outside of the TAC meetings. Many decisions were made based on the discussions in the TAC meetings. Specific concerns of the TAC are discussed later in the Statement of Reasonableness. Applying the new performance test rules to performance tests used to certify CEMS was not discussed during the TAC meetings. However, a notice of intent to amend the CEMS rules was published on April 27, 1992, and it is reasonable to apply the same requirements to all performance tests both for determining compliance with emission limitations and to certify the accuracy of CEMS. More general concerns of the TAC included:

1) A proposal to remove most of the performance test method and procedure sections of the individual performance standard rules and incorporating them into the new rules. The TAC was concerned that this centralization could, in some cases, alter the basis of the emission limits within those standards. Those emission limits were based on the test methods available at the time the standards were written. By deleting those lists of methods the MPCA may have removed the link between emission limit and test method and thereby altered the basis of the emission limit. For example, a general requirement to include condensible particulate matter in all particulate matter performance tests would have made the emission limits that do not include the condensible fraction more stringent. Therefore, the MPCA is no longer proposing to centralize the lists of test methods. The rule will allow the use of alternate or equivalent methods by retaining the original list of methods in the performance standard.

2) The early drafts of the proposed rule were, according to some TAC members, too rigid in their wording. The requirement that all notifications to the MPCA and all approvals or notifications by the MPCA must be in writing was criticized, but MPCA staff believe that this is necessary and reasonable. These submittals should be in writing as this provides a permanent record with a date that cannot be disputed. The requirement for written notification of testing does not preclude an initial notification by telephone but such notifications have caused problems in the past as the MPCA staff person taking the call is not always the person that will be coordinating the performance test for the MPCA and disputes sometimes arise about the time of the call and the content of the discussion. Facsimile transmittals will be accepted as written notification, however, so that the same day advantage of the telephone notification is retained.

3) The TAC felt that it was unreasonable that MPCA responses should be in writing as the MPCA's inaction could lead to invalidation of performance tests. This could occur if a performance test went ahead without written approval of a test plan by the MPCA. The procedures and schedules outlined in the rule, however, allow for enough time between test notification and the actual performance test date for MPCA staff to review the test plan, hold a pretest meeting and give final approval of the test plan. MPCA staff plan to use standardized approval letters to ensure that the process is not delayed internally. In cases where there are technical or other disputes about the test plan with the regulated party that prevent MPCA staff from making a final decision, then the MPCA would not issue an approval and the performance test should not go ahead. Any approval by the MPCA, for example to use a certain test plan, should be in writing to ensure that the approval comes from the appropriate staff person and to provide a permanent record of the approval.

4) The TAC objected to a requirement that new emissions units be constructed to allow for unobstructed stack sampling and opacity reading because, at large facilities, it is not always possible to do that. MPCA staff reworded the rule but finally decided that the requirement did not belong in a general rule for performance testing and a similar provision may be incorporated into the rules governing submittal of permit applications.

B. REASONABLENESS OF THE RULE BY SECTION

The following discussion addresses the reasonableness of specific provisions of the proposed rule.

B.1 AMENDED DEFINITIONS AND ABBREVIATIONS

Part 7005.0100 DEFINITIONS.

This section sets forth the definition of terms used throughout the state air pollution control rules. Definitions proposed that differ from the terms defined in the previous rule or in another section of the rules are discussed below.

Subpart 11 is amended as follows:

Subpart 11. Equivalent Method. "Equivalent Method" means a method of sampling and analyzing for an air pollutant which has been demonstrated to the commissioner's satisfaction to have under specified conditions a consistent and quantitatively known relationship to the Reference methods in Code of Federal Regulations, title 40, part 60, appendix A as amended; part 61, appendix B as amended; and part 51, appendix M as amended.

This definition is amended to add Code of Federal Regulations, title 40, part 61, appendix B; and part 51, appendix M. This change is needed because these are sources of federally approved test methods for testing of emissions from stationary sources. 40 CFR 61, appendix B, contains test methods approved for testing of emissions of pollutants subject to national emission standards for hazardous air pollutants (NESHAPS), including mercury and beryllium which are subject to existing Minnesota rules. Minnesota administers the NESHAPS

program in the state through a delegation from EPA, so it is reasonable to include the NESHAPS test methods in state rules. 40 CFR 51, appendix M, contains methods approved for testing of certain pollutants for which a State Implementation Plan (SIP) is required under the federal Clean Air Act. This includes methods for determination of PM10, a pollutant that has limits set in several air emission permits in order to ensure that the national ambient air quality standard for PM10 is not violated in Minnesota. This amendment is reasonable as it clearly references test methods a facility can use that will be approved by the U.S. Environmental Protection Agency (EPA) and MPCA. The references are included "as amended" so that any corrections or revisions to test methods, and any additions of new methods for performance testing, will be included in the definition. In practice a testing company will use a standard procedure based upon the most recently published method rather than reverting to the procedures in effect at the time that a particular definition came into effect so it is reasonable to say "as amended."

Subpart 30a is amended as follows:

Subpart 30a. PM-10. "PM-10" means *~~particulate matter~~* finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal ten micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method.

This amendment defines PM10 in the same form as the federal definition of PM10 emissions as given in 40 CFR 51.100(rr). The federal definition defines PM10 in terms of the reference methods. The reference methods for PM10 determination are methods 201 and 201A and these methods state that condensible particulate matter is part of the total PM10 determination. The current definition in Minnesota rules defines PM10 as "particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers", which is a contradiction of the federal definition as it is based on the Minnesota

definition of particulate matter, which does not specifically include condensible fraction. Therefore, it is reasonable to amend the definition to be consistent with the federal definition and to clarify that the Minnesota SIP for PM10 includes condensible PM10 in the PM10 emission limits consistent with federal requirements. U.S. EPA promulgated method 202 in 1991 for use in measuring condensible PM10 emissions in conjunction with methods 201 and 201A, so method 202 is referenced in the proposed rules.

Subpart 35c is amended as follows:

Subpart 35c. Reference Method; Method. "Reference Method" or "Method" means the procedures for performance tests in Code of Federal Regulations, title 40, part 60, appendix A, as amended; part 61, appendix B, as amended; and part 51, appendix M, as amended.

This definition is amended to add Code of Federal Regulations, title 40, part 61, appendix B; and part 51, appendix M. This change is needed because these are sources of existing and proposed test methods. The amendment also updates the test methods in Part 60, appendix A, to current methods rather than 1982 methods. As the references are included "as amended" any corrections or revisions to test methods, and any additions of new methods for performance testing, will be included in the definition. In practice a testing company will use a standard procedure based upon the most recently published method rather than reverting to the procedures in effect at the time that a particular definition came into effect so it is reasonable to say "as amended". This amendment is reasonable as it clearly states which test methods the MPCA considers to be reference methods a facility can use that are approved by the EPA.

Subpart 42b is amended as follows:

Subpart 42b. State Air Pollution Control Rules. "State air pollution control rules" means parts 7005.0010 to 7005.3060 and 7017.2000 to 7017.2060.

This definition is amended to include the proposed rule within the general definition of the state air pollution control rules. This change is reasonable because it makes the general definitions apply to the proposed performance test rules as they do to the current performance test rule (part 7005.1860), because it saves repeating general definitions in the performance test rule, and it assures that terms are defined the same way in the standards of performance and in the performance test procedures used to verify compliance with those standards.

PART 7005.0110 ABBREVIATIONS.

Item GG. is added to pt. 7005.0110 as follows:

GG. VOC, Volatile Organic Compound.

This addition is necessary as the abbreviation is used frequently in compliance documents. The abbreviation is the one commonly used by EPA and MPCA and in the regulated community. It is reasonable to adopt the abbreviation so that it can be used in the rules as needed.

Item HH. is added to pt. 7005.0110 as follows:

HH. EPA, United States Environmental Protection Agency.

This addition is useful and necessary as the abbreviation is used frequently within the proposed rules, in existing Minn. rules and in compliance documents. The EPA is as well known to the public by the above abbreviation as by its full name. It is reasonable to add this abbreviation so that it can be used within the rules as needed to make the rules more concise and easier to read.

PART 7005.0116 OPACITY STANDARD ADJUSTMENT.

Subpart 1. Application For Permit Modification.

The reference in item A to pts. 7005.1850 to 7005.1880 for tests conducted has been changed to include pt. 7017.2000 to 7017.2060. This is reasonable as the original reference included pt. 7005.1860, which will be replaced by pts. 7017.2000 to 7017.2060. As the original reference was there to

indicate that only performance tests that were accepted as valid under Minnesota rules would be considered under this subpart, the scope of the subpart is not changed and the rewording is consistent with the overall intent of the proposed rule amendments.

PART 7011.1630 EXCEPTIONS.

This part has been changed to reflect a currently ongoing renumbering of the state air pollution control rules. Therefore, this part of the sulfuric acid plant standard of performance has been renumbered from 7005.1410 to 7011.1630, and the reference to the shutdown and breakdown rule changed to the new numer for that rule, 7011.0000. This amendment does not change the scope of this subpart, but does more specifically refer to only the shutdown/breakdown rule, rather than to the section of the rules that contain the shutdown/breakdown rule. The amendment deletes reference to the performance stack test, CEMS and reporting rules, which are not relevant to this part. This amendment will allow the reader to refer directly to the relevant shutdown/breakdown requirements.

PART 7005.1850 CONTINUOUS MONITORING

Subpart 9. Monitoring Data.

The reference to pt. 7005.1860, subp. 7, item B has been replaced with part 7017.2060, subp. 6.

This renumbering is reasonable as the specific reference to opacity testing requirements in the existing rule is replaced by the equivalent reference in the proposed rules. The proposed rule contains an expanded version of the same requirement in a reworded form and the reasonableness of this is explained under that part of this document referring to pt. 7017.2060, subp. 6, of the proposed rule. The expansion clarifies the existing rule language.

PART 7005.1876 CALCULATION OF ACTUAL EMISSIONS FOR EMISSION INVENTORY.

Subpart 1. Method.

Subpart 3. Stack Test Data.

Subpart 4. Volatile Organic Compound (VOC) Material.

All references to pt. 7005.1860 have been changed to pts. 7017.2000 to 7017.2060. This is reasonable as the original references were intended to indicate that only performance tests that were accepted as valid under Minnesota rules would be considered under these subparts. The reference must be changed to reference the new performance stack test rule in place of the current rule, which is being repealed.

B.2 AMENDMENTS WITHIN STANDARDS OF PERFORMANCE RULES:

The following parts of the rules concerning standards of performance for various stationary source categories are amended to incorporate a reference to the proposed rules, pts. 7017.2000 to 7017.2060, under the part of each standard that refers to performance test procedures. This is reasonable as the proposed rule updates the general notification, testing and submittal requirements of the existing rule 7005.1860 and of Exhibit C, a part of air emission permits that describes testing requirements. This reference does not change the basis of the emission limits within the standards as the methods and procedures required in the individual standards still apply under the proposed rules.

As the structure of these parts varies slightly between the various standards, the amendments will be achieved in one of three ways, as appropriate:

i) The following standard does not contain a part entitled "Performance Test Procedures" so the part entitled "Performance Tests" will be amended. The existing text consists of only one sentence, stating that method 9 shall be used for the determination of opacity so a second sentence will be added to reference the proposed rules, pts. 7017.2000 to 7017.2060. The new part will be:

EMISSION STANDARDS FOR VISIBLE AIR CONTAMINANTS

PART 7005.1130 PERFORMANCE TESTS. (to be renumbered as 7011.0115)
Unless another method is approved by the agency, any person required to submit performance tests for emission facilities for which pts. 7005.1100 to 7005.1130 are applicable shall utilize Method 9 for visual determination of opacity.
Performance tests shall be conducted according to the requirements of this part and of pts. 7017.2000 to 7017.2060.

ii) The following standards contain a part entitled "Performance Test Procedures" with a section of text that is not divided into subparts. The reference to the proposed rules will be added, as subpart 1, and the existing text will be put under subpart 2, with a subtitle "Special Procedures".

The general format is:

<part number> PERFORMANCE TEST PROCEDURES.

Subpart 1. In general. Performance tests shall be conducted according to the requirements of this part and of pts. 7017.2000 to 7017.2060.

Subpart 2. Special procedures. <existing text>

The affected standards and parts are:

STANDARDS OF PERFORMANCE FOR INDUSTRIAL PROCESS EQUIPMENT

7005.0500 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.0725)

STANDARDS OF PERFORMANCE FOR NITRIC ACID PLANTS

7005.1500 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1725)

STANDARDS OF PERFORMANCE FOR PORTLAND CEMENT PLANTS

7005.1950 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.0825)

STANDARDS OF PERFORMANCE FOR ASPHALT CONCRETE PLANTS

7005.2040 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.0920)

STANDARDS OF PERFORMANCE FOR SECONDARY LEAD SMELTERS

7005.2230 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1815)

STANDARDS OF PERFORMANCE FOR SECONDARY BRASS AND BRONZE INGOT PRODUCTION PLANTS

7005.2280 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1915)

STANDARDS OF PERFORMANCE FOR IRON AND STEEL PLANTS

7005.2330 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.2015)

STANDARDS OF PERFORMANCE FOR COAL HANDLING FACILITIES

7005.2920 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1135)

iii) The following standards contain a part entitled "Performance Test Procedures" with sections of text divided into subparts. The reference to the proposed rules will be added, as subpart 1, and the existing subparts will each be renumbered by an increment of one.

The general format is:

PART <part number> PERFORMANCE TEST PROCEDURES.

Subpart 1. **In general.** Performance tests shall be conducted according to the requirements of this part and of pts. 7017.2000 to 7017.2060.

Subpart 2. <existing subpart 1>

Subpart 3. <existing subpart 2>, etc.

The affected standards and subparts are:

STANDARDS OF PERFORMANCE FOR INDIRECT HEATING FOSSIL FUEL-BURNING EQUIPMENT

7005.0370 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.0535)

STANDARDS OF PERFORMANCE FOR SULFURIC ACID PLANTS

7005.1400 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1625)

STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES

7005.2160 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1430)

STANDARDS OF PERFORMANCE FOR SEWAGE SLUDGE INCINERATORS

7005.2400 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.1325)

EMISSION STANDARDS FOR BERYLLIUM

7005.2590 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.9945)

EMISSION STANDARDS FOR MERCURY

7005.2680 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.9954)

STANDARDS OF PERFORMANCE FOR DIRECT HEATING FOSSIL FUEL-BURNING EQUIPMENT

7005.2790 PERFORMANCE TEST PROCEDURES. (renumbered as 7011.0620)

B.3 NEW RULE SECTION, PARTS 7017.2000 TO 7017.2060

PART 7017.2000 APPLICABILITY.

Subpart 1. Applicability.

This subpart describes the scope and applicability of pts. 7017.2000 to 7017.2060. The requirements of these parts apply unless more stringent or equivalent requirements exist in a compliance document, federal regulation, Minnesota rule or statute. Therefore, a permit or other compliance document may specify certain requirements for conducting a performance test due to unique factors at an emission facility but otherwise these rules consolidate and make uniform the performance test procedures. Compliance documents will need only to identify exceptions as necessitated by unique circumstances at the facility and need not repeat all of these rules. Note that Exhibit C will be withdrawn when the rules come into effect so that the testing requirements contained in permits with Exhibit C as an attachment will be determined by the proposed rules and not by Exhibit C. Special performance test requirements written into the permit itself are not affected by the removal of Exhibit C.

The scope and applicability are reasonable as they do not change the specific requirements of other rules, compliance documents or statutes but, as many of the requirements of these parts are not detailed in those sources, the new parts will provide a general, centralized reference for any emission facility that is required to conduct a performance test.

Subpart 2. Transition to new rule.

This subpart makes the statement that the new rule will supersede Exhibit C. The requirements of any version of Exhibit C attached to a permit prior to the promulgation of this rule will no longer apply to those permits.

When this rule is promulgated, MPCA staff will no longer issue any form of Exhibit C. This is reasonable as the proposed rules update and make more consistent the relevant requirements of Exhibit C and the existing Minn. rule 7005.1860. Therefore, Exhibit C will no longer be needed and its withdrawal will facilitate consistent application of the rules concerning performance test requirements.

PART 7017.2005 DEFINITIONS.

This part contains definitions of terms used that are specific to pts. 7017.2000 to 7017.2060. The reasonableness of each definition is given below.

Subpart 1. Scope.

This subpart explains that the definitions are specific to pts. 7017.2000 to 7017.2060. Since these definitions were formulated solely for this rule, it is reasonable to limit their scope to this rule.

Subpart 2. Compliance Document.

The definition of compliance document lists all documents which can contain enforceable testing schedules and emission limits that must be quantified or characterized by performance testing. This is reasonable as all performance tests, irrespective of the document that ordered them should be subject to the requirements of the proposed rule in addition to any specific requirements given in that document.

Subpart 3. Performance Test.

A performance test is defined so as to reflect the way that performance tests are used or required by the MPCA to determine compliance with an emission limit, in a compliance schedule where testing is required to characterize emissions when emission limits have not been established and to certify the accuracy of a CEMS. The definition is reasonable as it is consistent with the use of the term within the MPCA and in the regulated community.

Subpart 4. Test Plan.

The term "test plan" is used frequently within the proposed rule and there are specific requirements for the format and use of this document. The definition is based on the current standard format for the test plan that is written by MPCA staff prior to each performance test. This is familiar to emission facilities and testing companies and the definition is, therefore, reasonable.

Subpart 5. Test Run.

This defines the term test run as applied to performance tests. The definition is reasonable as it is consistent with the use of the term in the federal reference methods and with the use of the term by the MPCA and the regulated community.

Subpart 6. Testing Company.

The term "testing company" is used many times during the proposed rule text to describe the entity performing the sampling and analyzing involved in conducting a performance test, so it is reasonable to define the term. In general this subpart states that some entity other than the emission facility itself or a direct subsidiary or parent company should perform the test. This is reasonable as the test should be performed without a conflict of interest situation occurring, which could reduce objectivity and confidence in the test results. In practice very few emission facilities possess the necessary equipment or experience to conduct the tests. Performance testing requires a large capital expenditure in sampling and analytical equipment and intensive training so in most cases it makes financial sense to hire a contractor/consultant for this work. It is very rare for an emission facility to request to do some or all of its performance testing using its own staff. There is a process for making such a request, as given in pt. 7017.2020, subp. 1, which will be described later in this text.

Subpart 7. Worst Case Conditions.

This definition is needed to define, in a manner that can apply to all types of emission facility, how to determine what the worst case condition is for any emission unit. In principle, the MPCA requires the emissions units to be operated at the conditions which give the highest emission rate of an air pollutant. In doing this, the emission facility can be assumed to be in compliance with the emission limit at all other times if compliance is demonstrated at the worst case condition. It must also be recognized that if the emissions unit has an operating condition limit imposed by the applicable compliance document, federal regulation, or Minnesota rule or statute, it is not necessary to operate outside of the allowed range to demonstrate compliance within the allowed range. Therefore, the scope of worst case is limited to the allowed range of operations. This definition also limits the number of variables that will be taken into account when defining this condition, as not all emission facilities are able to monitor the same variables and it would be impractical and unnecessary for MPCA staff to track a large number of variables after the performance test. Therefore, the definition only uses the process or operating rate of the emissions unit plus any operating conditions that are already limited by the applicable compliance document, federal regulation, or Minnesota rule or statute. If there is no limit or range of operation given, the worst case condition will be assessed only by determining the process or operating rate at which the emission rate is highest. As this definition is only applied in the rule if the worst case condition is known or can be calculated, its implementation is reasonable.

PART 7017.2010 INCORPORATION OF TEST METHODS BY REFERENCE.

Items A, B and C incorporate the sources of federally approved test methods. It is reasonable to incorporate these methods by reference as U.S. EPA promulgated these methods for performance testing with the federal emission

standards, and Minnesota standards and limits are based on or derived from federal standards. They are incorporated "as amended" so that any corrections or revisions that are made to the methods subsequent to the promulgation of this rule will apply, and any new methods that are added will be available for performance testing. This is reasonable as in practice a testing company will use a standard procedure based upon the most recently published method rather than using the procedures in effect at the time that rules or standards were promulgated in each state that the testing company conducts performance tests.

Code of Federal Regulations, Title 40, Part 60, Appendix A (40 CFR 60, Appendix A) contains federally approved methods for testing against New Source Performance Standards (NSPS) and these are the majority of test methods used in determining compliance with applicable compliance documents and Minnesota rules or statutes. 40 CFR 61, Appendix B, contains test methods approved for testing of emissions of pollutants subject to national emission standards for hazardous air pollutants (NESHAPS), including mercury and beryllium which are subject to existing Minnesota rules. 40 CFR 51, Appendix M, contains methods approved for testing of certain pollutants for which a State Implementation Plan (SIP) is required. This includes methods for determination of PM10, a pollutant that has limits set in several air emission permits. This subpart is reasonable as it clearly references the sources of test methods a facility can use that will be approved by the U.S. EPA and MPCA.

PART 7017.2015 INCORPORATION OF FEDERAL TESTING REQUIREMENTS BY REFERENCE.

While pt. 7017.2010 incorporated by reference the federal test methods, this part incorporates by reference the performance test requirements that apply to sources subject to NSPS or NESHAPS. It is reasonable to incorporate these testing requirements by reference into this general performance test rule to inform or remind the regulated community of these requirements and to reflect

that EPA has delegated to the MPCA the authority to implement the NSPS and NESHAPS programs. The NSPS and NESHAPS performance test requirements are essential to the ability of the MPCA to administer, verify compliance with and enforce the NSPS and NESHAPS under its delegations.

It is also reasonable to identify where EPA will make decisions not delegated to the MPCA. 40 CFR pts. 60.8(b)(2), 60.8(b)(3), 60.11(e), and 61.13(h)(1)(ii) concerns waivers of testing, alternative testing methods, and opacity standard adjustments. The rule clarifies where EPA approval is required in order to avoid confusion for the regulated party and MPCA staff in applying these rules. EPA has stated in its delegation that states cannot make this case-by-case determination, so the rule should reflect this. The rule part is incorporated by reference, however, so that once EPA approves alternative requirements for a source, the state can enforce them as a matter of state law. EPA, of course, can also enforce these requirements under federal law.

In a separate rulemaking in progress, the MPCA is incorporating by reference the NSPS and NESHAPS standards needed to update Minnesota rules to current federal requirements, and is also incorporating by reference other general requirements of the NSPS and NESHAPS programs.

PART 7017.2018 SUBMITTALS.

This part gives a contact and address for routing all submittals, notifications or applications relating to the requirements of the proposed rule. The Compliance Determination Unit is responsible for tracking all of these requirements and for reviewing or approving many of them. It is therefore practical and reasonable to provide a single contact at the MPCA for all correspondence relating to the proposed rule. Currently, some of this correspondence is being sent to the Permit Section or Enforcement Unit, which delays response and makes it difficult to implement procedures consistently.

PART 7017.2020 PERFORMANCE TESTS GENERAL REQUIREMENTS.

Subpart 1. Testing required.

This replaces pt. 7005.1860, subpart 1 and expands on that language to specify the circumstances under which a performance test may be required if it is not already a part of a compliance document or rule schedule. The amendment clarifies when the MPCA will order a performance test to be conducted.

The list as a whole is reasonable as it is limited to the emission facility's obligation to show that the emission facility is in compliance with the regulations at all times and to demonstrate compliance should there be indicators of noncompliance or a change in the nature of operations at the emission facility which may increase emissions of an air pollutant. It lists circumstances where the compliance status of an emission facility needs to be determined following an indicator of noncompliance or where the nature of the emissions needs to be determined in order to determine emission or other limits for the permitting process.

Item A provides that in cases where the amount of emissions and/or type of emissions are unknown it may be necessary to conduct a performance test in order to set meaningful emission limits at the emission facility or otherwise to gather data for the permitting process. This is reasonable as permit conditions need to be derived from good quality data and a performance test is the best way to determine emissions and must be used if no acceptable way of estimating emissions is available.

Through item B, a performance test can be required, as currently, to compare actual emissions against the limits set out in the compliance documents or applicable regulations in addition to any compliance schedule in that document. This is reasonable as it is limited to the owner or operator's need to prove compliance at all times with the applicable limits and this condition would often be triggered by an indirect or direct indicator of noncompliance.

Item C describes the MPCA's authority to order a retest if a performance test shows noncompliance or indeterminate compliance. It is standard procedure within the MPCA to require a retest, usually within 30 days of determination of noncompliance or indeterminate compliance. It is reasonable to require a retest in both cases as the emission facility has failed to demonstrate compliance with an enforceable compliance schedule and is then obligated to come into compliance, which can be verified by a retest.

Item D says that if an MPCA inspector finds indicators of noncompliance at an emission facility, which can include direct indicators like violation of opacity standards and indirect indicators like malfunctioning monitoring devices, testing should be an option available to enforcement staff so that the extent of noncompliance can be determined. This is reasonable as emission facilities where inspection shows that equipment is properly maintained would not be required to conduct a performance test under this item.

Item E states that any modification at an emission facility that could change the amount or type of emissions from the emission facility, generally any modification that would require a permit amendment or equivalent procedure, makes the emission facility subject to testing if the emission rate may increase or if additional air pollutants are emitted. This is reasonable as it is intended to ensure that compliance will be maintained following the modification as small changes in raw material usage, process rate or operating conditions can cause large changes in emission rate or type of emissions. The requirement to test will often be based on materials balance data or comparison to similar units.

Item F specifies that a performance test will be required in order to determine the relative accuracy of a CEMS. This is reasonable as performance testing using the applicable reference methods is the federally mandated

procedure for determining relative accuracy. Additionally, the owner or operator of an emission facility who is required to install and/or certify a CEMS has an obligation to maintain the CEMS at all times. The MPCA must be able to require that the system be tested according to the applicable compliance schedule and additionally if an MPCA inspection or an assessment of CEMS performance makes questionable the validity of the data generated by the CEMS.

One item was deleted at the suggestion of a member of the TAC; the provision that a performance test may be required following a complaint from the public, which may have placed excessive testing demands on emission facilities subject to complaints. The provision is still covered under Item D where, if an MPCA inspector was to verify a complaint by observing indicators of noncompliance then a performance test could be ordered.

Subpart 2. Testing Company.

This subpart states that the test must be conducted by a testing company as defined in the proposed rule unless the commissioner gives written approval of an alternative. That is, the emission facility or a subsidiary or division of the emission facility should not perform the test. This is reasonable as the test should be performed without a conflict of interest situation occurring, which could reduce confidence and objectivity in the test results. In practice very few emission facilities possess the necessary equipment or experience to conduct the tests. Performance testing requires a large investment in sampling and analytical equipment and training so in most cases it makes financial sense to hire a contractor/consultant for this work. It is very rare for an emission facility to request to do some or all of its performance testing using its own staff. The MPCA will consider requests for an exemption to this requirement during the permit process if special circumstances exist. Currently, only the Metropolitan Waste Control Commission (MWCC) is

exempted from this requirement. MWCC is required to test all of its sewage sludge incinerators, based at two locations annually and is allowed to conduct its own tests except that one incinerator at each facility must be tested by an outside testing company. MWCC has its own air quality laboratory and has submitted its quality assurance procedures for review by the MPCA and under these conditions the MPCA has determined and incorporated into the permit for MWCC, that the test results will be acceptable for compliance determination.

Initially, a requirement that performance tests be conducted by an independent testing company (which was defined more restrictively than the proposed definition of "testing company") was proposed under the general requirements of pt. 7017.2020 and this caused concern amongst a number of representatives, including those from Koch Refining, MMT Environmental Services and MWCC. MWCC conducts some of its own testing, as already explained. MMT Environmental Services conducts performance tests at printing facilities where MMT control equipment is installed, which would not have been allowed under the initial draft wording. The MPCA is not aware of any problems having arisen from these situations, so the reworded rule would allow this practice. The representative from Koch Refinery argued that the requirement was unduly restrictive and was regulating against an unlikely circumstance. Alternative ideas were discussed, including laboratory certification or approval programs. However, the MPCA does not presently have the available staff resources to create and maintain such a program.

Subpart 3. Safety and Access.

This subpart is adapted from the June 4, 1992, version of Exhibit C, section E.10, and reworded into rule format. The language is consistent with the federal NSPS and NESHAPS testing requirements, specifically 40 CFR 60.8(e)(2) and 40 CFR 61.13(d), both of which require a safe work platform and safe sampling access. The subpart is reasonable as it reinforces the obligation

for the owner or operator to observe safety standards, such as OSHA requirements, for the members of the testing company and MPCA staff who may be witnessing the performance test.

The TAC commented that proposed extra wording, to reject a performance test if an observer was subjected to risk of exposure or physical harm, was ambiguous and implied that a performance test could be rejected based on an observer's subjective assessment of safety. MPCA staff agreed that the additional wording was unnecessary and caused ambiguity rather than clarification, so that wording was removed.

Subpart 4. Verification of Test Results.

This subpart states that the results of a performance test are not final until a complete report has been submitted and reviewed by the MPCA and a letter stating the compliance status of the emission facility has been sent to the owner or operator of the emission facility. In effect, this means that the compliance status of the emission facility remains as it was before the performance test until the letter is sent. This is reasonable as there are several reasons why the results may not be acceptable to the MPCA, including errors in methodology and unacceptable deviation from the test plan. During 1991 and 1992 approximately 8-12% of performance tests were at least partly rejected, generally resulting in a requirement to repeat all or part of the performance test. It is reasonable that the owner or operator of the emission facility should not treat performance test results as final until they are actually complete and they cannot be considered as complete unless they have been reviewed and approved by the MPCA.

Subpart 5. Test Runs.

This replaces pt. 7005.1860, subp. 5.

It adds, for clarification, that opacity readings and CEMS relative accuracy tests are subject to alternate requirements. Compliance with opacity limits is determined differently, as discussed under pt. 7017.2060, subp. 5 and 6, while relative accuracy tests follow federal guidelines in 40 CFR 60, appendix B. The circumstances where more than three test runs will be required are listed, whereas the current rule states only "under unusual circumstances." The wording of this subpart is based on the federal NSPS testing requirements as given in 40 CFR 60.8(f) except that it is expanded to include opacity and CEMS relative accuracy tests and to include the reasons why more than three test runs may be required.

This subpart states that more test runs will be required if mandated by the applicable compliance document, federal regulation or Minnesota rule or statute. For example, a power plant operating with coal as the primary fuel may be required to conduct additional test runs with additional fuels if this is representative of its range of operation. This is reasonable as the emissions unit must be shown to be in compliance with the applicable emission limits at all of its operating conditions and an applicable compliance document, federal rule, Minnesota rule or statute may dictate that testing at more than one condition rather than a single condition is necessary to do this. Also, Code of Federal Regulations, title 40, part 60, requires that three one hour determinations of opacity be conducted for initial compliance of NSPS sources. It is reasonable that federal regulations must be followed as the MPCA cannot impose requirements that are less stringent than the federal requirement for a performance test subject to federal regulation.

The final paragraph of this subpart, stating that compliance may be determined from the average of two test runs if a third run has to be discontinued due to adverse conditions beyond the control of the facility and

the testing company, is taken from existing pt. 7005.1860, subp. 5, which in turn is based on the same provision in 40 CFR 60.8(f). It is reasonable that MPCA staff should have discretion in applying this provision as the circumstances of each performance test are unique. In general, MPCA staff will allow the use of just two of the test runs if the reason for abandoning the third run was beyond the control of the facility and the testing staff, a genuine attempt to start a third run was made and the circumstances did not allow a repeat run to be started, the remaining two runs are validated by review of the test report, and the circumstances are well documented. A test run giving significantly higher emission results than the two other runs is not sufficient justification for discounting that run unless other, conclusive evidence of the test conditions indicate a process upset, sampling error or similar circumstance occurred during that test run.

PART 7017.2025 OPERATIONAL REQUIREMENTS AND LIMITATIONS

This part specifies how the owner or operator of the emission facility can determine how the emission unit(s) to be tested must be operated during the performance test. The actual conditions of the performance test then dictates if any operational limitations will be imposed on the emissions units. Also, this part describes the action that will be taken by the MPCA if the performance test fails to demonstrate compliance and if a retest also fails to demonstrate compliance.

Subpart 1. Scope.

This subpart describes the function of pt. 7017.2025. It is reasonable to include this as this part details important procedures for continued demonstration of compliance and significant actions that will be taken if a performance test does not demonstrate compliance with the applicable emission limits. It also specifies that certain conditions such as start-up and

malfunction are not representative conditions for a performance test to be conducted unless specified otherwise in the applicable regulation or compliance document. This is reasonable as the emission limits do not normally apply under the listed conditions. The results from testing under such conditions therefore have no practical use and should not be included in the interpretation of worst case conditions.

Subpart 2. Operating Conditions for Performance Testing.

This subpart replaces the existing rule, pt. 7005.1860, subp. 4, which gave broad authority for the commissioner to require the emission facility to test at whatever conditions were stipulated by the MPCA. The new rule is more specific and specifies to the owner or operator the operating requirements for any emission unit and its associated control equipment during a performance test. In principle, the performance test must be conducted at worst case conditions. This is reasonable as compliance demonstrated at worst case conditions gives reasonable assurance that the emissions unit will be in compliance at all other operating conditions. A list of exemptions is given in recognition that operation at worst case conditions is sometimes not possible or is not necessary.

Item A states that if the applicable compliance document, federal regulation, or Minnesota rule or statute specifies alternative operating conditions for performance testing, then those conditions must be observed rather than testing at worst case conditions. This is reasonable as the compliance document, federal regulation, or Minnesota rule or statute can address specific categories of emission facility or individual emission facilities and base the operating requirements on specific or unique circumstances at those facilities.

Item B addresses cases where the worst case condition is not known or calculable and specifies that the maximum achievable process or operating rate is the required condition for testing if this applies. This is reasonable as in most cases the highest operating or process rate will give the highest or close to the highest emission rate of a pollutant. It is reasonable to give this exemption as the alternative would be to conduct the performance test at more than one set of conditions in order to determine the actual worst case and this would be a significant extra expense for the owner or operator.

Item C allows the owner or operator to conduct the performance test at conditions that are not worst case conditions. This provision will lift the burden on any emission facility that is unable to reach the actual worst case condition, for example if an emission unit is operating below capacity due to production problems or shortage of orders for a product. Under subpart 3, certain operational limitations will be imposed as a result of this decision in order to ensure continued compliance. This item can apply to cases like printing facilities testing VOC emission rates, where worst case is a function of the rate of use of VOC-containing inks. As a printing press has a much higher theoretical ink usage rate than is normally achievable or wanted in practice, the highest ink usage rate cannot be tested in normal production conditions. Therefore, the performance test could be conducted while running a print job that represents at least the highest ink usage rate that will normally occur, which will be the effective rather than the actual worst case condition.

Item D waives the worst case condition requirement if the performance test is conducted solely for the purpose of completing a relative accuracy test on a CEMS. The requirement here is to test at or above 50 percent of rated capacity. This is reasonable as a relative accuracy test is conducted to assess the agreement of measurements between the CEMS and the reference method rather than

to determine the emissions of a pollutant for determination of compliance with an emission limit, and therefore facilities can be given more latitude in selecting the operational conditions for testing.

Subpart 3. Compliance Demonstrated at Tested Conditions.

This subpart lists the type of operating limitations, if any, that will be imposed after the results of the performance test have been verified in writing by the MPCA and if the results of the performance test demonstrate compliance with the applicable emission limit. This list corresponds to the options available under subpart 2. In order to operate beyond the applicable limitations, the owner or operator must conduct another performance test at the alternative conditions and demonstrate compliance at those conditions.

Item A specifies the limitations that apply when the owner or operator was required to test at worst case conditions. The test may have actually occurred under alternative conditions, either because the owner or operator chose to do so under subpart 2(C) or because of operational limitations or problems on the day of the performance test. Worst case testing is only required when the worst case condition is known or calculable. It is then reasonable that operating limits be imposed if the performance test is not conducted at worst case conditions as the emission rate would be higher at any condition that is closer to worst case than the condition tested. Only by conducting the performance test at worst case conditions is compliance demonstrated for all conditions so that no operating limitations would need to be imposed. Only those operating parameters under the definition of worst case conditions for the emission unit to be tested are subject to limitations after the performance test. For example, a thermal incinerator for controlling VOC emissions, with a minimum inlet temperature specified in the air emission permit for the emission facility would be tested with the incinerator operating at that minimum temperature as

part of the worst case testing requirement. If the performance test was conducted with an inlet temperature higher than the minimum then the tested temperature becomes the new minimum as the emission rate would have been higher at the lower temperature, and could have exceeded the applicable emission limit.

Item B states that if the performance test was conducted according to operating conditions in the applicable compliance document, federal regulation, or Minnesota rule or statute then the operational limitations specified therein must be followed. This is reasonable as the compliance document, federal regulation, or Minnesota rule or statute that applies to a source or source category can define conditions and limitations that are more specific than a general rule. Therefore, the specific requirements should apply in place of the general rule.

Item C applies when the worst case condition was not known or calculable and the owner or operator was required to conduct the performance test at the highest achievable process or operating rate pursuant to subpart 2(B). In subpart 2(B) the highest achievable process or operating rate is assumed to be the worst case condition. Therefore, it is reasonable, consistent with item A of this subpart, that the emission facility shall not be operated above the tested process or operating rate.

Item D says that no operating limitations will be imposed if the performance test was conducted solely for the purpose of completing a relative accuracy test on a CEMS. This is reasonable as a relative accuracy test is conducted to assess the agreement of measurements between the CEMS and the reference method rather than to determine the emissions of a pollutant for determination of compliance with an emission limit.

Subpart 4. Failure to Demonstrate Compliance.

The language of this subpart is based on that contained in the special conditions section of air emission permits, in enforcement documents and in

letters of notification of noncompliance or indeterminate compliance that are sent by MPCA staff following the review of test reports. Under the proposed rules, when a review shows failure to demonstrate compliance the notification letter to the emission facility will contain a schedule for conducting a retest unless MPCA staff determine that an alternative compliance requirement is more applicable. If the retest also fails to demonstrate compliance, additional enforcement procedures are applied and the owner or operator may be required to shut down the affected emissions units unless or until the owner or operator can demonstrate to the MPCA that those units can be operated in compliance with the emission limits.

Item A requires that a retest be conducted within 30 days of receipt of the written notice of failure to test, which will be the same letter that contains the test deadlines. Thirty (30) days is a reasonable time period for the owner or operator to revise the previous test plan and schedule a date with a testing company (the same company that performed the previous test is usually contracted). It is consistent with the length of time required for notification of testing, thus allowing for scheduling of a pretest meeting and ordering of EPA audit samples, if necessary. As the owner or operator has the opportunity to read the test report and compare the results against the applicable emission limits during the time between submittal of the report to the MPCA and receipt of a notification letter from the MPCA, the owner or operator can make initial preparations for scheduling the retest. The average time between report submittal and sending the notification letter is about two months and although the reports are prioritized so that those indicating noncompliance are reviewed more quickly, the process still takes a minimum of three to four weeks due to the need for internal review of the notification letter. In that the emissions unit(s) may be operating in a noncompliance status, a deadline of more than 30

days for retesting is not acceptable unless exceptional circumstances apply, as detailed in item D.

Item B requires the owner or operator to make certain arrangements at least 21 days before the test date. In effect this gives the owner or operator 9 days to arrange the test date, revise the test plan and contact the MPCA to arrange a pretest meeting. This is a reasonable time frame for those activities. The pretest meeting, as for all tests, should be held at least 7 working days prior to the test date. This is reasonable as the test plan will have been submitted by this time and any issues arising from the previous test should be discussed well in advance of the retest and resolved so that a final test plan can be approved in writing by MPCA staff.

Item C references pt. 7017.2035 as the source of requirements for submitting test results. The time frame is the same as for all performance tests, usually 45 days for submittal of the test report unless the compliance document is amended to allow extra time, for example to allow for complex analytical procedures. In some cases, the report may be requested within 30 days if the testing was for criteria pollutants only and the retest is controversial. However, the 30 day requirement is a tight schedule and will be applied sparingly.

Item D specifies the conditions under which the MPCA will allow an extension to the deadline for conducting a retest. The conditions listed are reasonable as they cover any circumstance that is beyond reasonable control of the owner or operator that would prevent a retest being conducted as required. For example, subitem 1 would apply to asphalt plants that do not operate during the winter months. Subitem 2 is reasonable as the emission limits do not apply in cases of malfunction or breakdown. In some cases opacity readings cannot be taken during the winter months due to condensed moisture plumes and this situation would be

covered under subitem 3. Subitem 4 is a general statement that covers unforeseen circumstances beyond the control of the owner or operator that prevent the test being conducted as required. This might include technical problems that are keeping production at a level significantly lower than optimum, economic difficulties or labor shortage.

Also in Item D the process for applying for an extension is outlined. The application must be submitted in writing in advance of the deadline for the retest and must detail the reasons for the request. This is reasonable as this process gives MPCA staff the information required to determine that the request is consistent with this subpart and it provides a permanent record of the reasons for the request. The owner or operator must receive written approval of an extension for the extension to be effective, which is reasonable as it is important that all parties have a written record of the new dates and that the appropriate MPCA staff person issues the approval. Consistent with the 30 day notification of testing requirement, the extension may be for no longer than 30 days beyond the time the circumstance preventing the retesting being conducted exists.

Subpart 5. Failure of Retest.

This subpart is based upon language currently used in permits and other compliance documents. If a retest that was required under subpart 4 shows noncompliance and the reason the retest was noncompliance, this subpart applies. It does not apply if the reason for the retest was indeterminate compliance or if the retest shows indeterminate compliance - in these cases a second retest will be required. Therefore, upon a second determination of noncompliance, any emission unit contributing to the emissions that caused the noncompliance must be shut down until such a time as the MPCA gives written notice that the unit may be restarted. Permission to operate the unit follows satisfying the MPCA

that all changes in operating practice and any corrective actions that are necessary to ensure compliance with all applicable emission or efficiency limits have been made and that they will be implemented and continually observed in order to ensure continued compliance. For example, the owner or operator of a printing facility that has failed to comply with VOC emission limits and destruction efficiency using a thermal oxidizer may be able to demonstrate the conditions by raising the minimum operating temperature of the oxidizer, limiting the use of VOC containing inks and keeping a detailed record of oxidizer temperature and ink usage.

It is reasonable that the MPCA requires that the unit cease to be operated after two failures as it has then been determined that the unit is a source of unacceptable levels of air pollution. As the period of time between the first test failure and the notice of noncompliance for the second test would typically be between 4 to 6 months, the owner or operator will have had sufficient time to outline a compliance plan which could, if implemented immediately, avoid the need to shut down at all or at least minimize the shut down period. Also, the amount of corrective action needed will be related to the extent of the violation. If an emission limit is exceeded by a small amount, a small change in operating parameters may be sufficient to avoid any shutdown. However, if the violation was, for example, 50 percent above the emission limit, it is likely that new or improved air pollution control equipment, or a fundamental change in raw material or fuel usage may be required. In cases of high emissions where such modifications are needed, it is reasonable that the affected emission units not be operated until the changes are made.

Item A lists the general conditions that the owner or operator must demonstrate in order to continue to operate the affected emission unit, which are reasonable measures of the ability to demonstrate compliance with the

applicable limits as already explained. Item B states that the owner or operator must receive written confirmation that the affected emission units may be operated. This is reasonable as it ensures that the appropriate staff person gives the authorization and that all parties are aware of the exact conditions under which operation is allowed. Verbal confirmations are not acceptable as they do not provide a permanent or sufficiently detailed record of the conditions and could inadvertently be given by a staff person that has not been delegated authority to allow operation in this case. Additionally, the owner or operator must adhere to any new process or operating limits in order to continue to operate, which is reasonable in order to maintain compliance with the applicable emission limits.

Subpart 6. Agency Tests.

Minn. rule part 7005.1860, subp. 8, is renumbered and amended as follows:

Subpart 6. Agency Tests. Upon request of the agency or the commissioner, the owner or operator of an emission facility shall allow the agency, or any authorized employee or agent of the agency, to enter upon the premises of the owner or operator for the purposes of conducting performance tests. The owner or operator shall provide performance testing facilities which will enable the agency or its agents or employees to conduct performance tests, including:

A. sampling ports adequate for the applicable test methods
B. safe sampling platform(s);

C. safe access to sampling platform(s); and

D. utilities for sampling and testing equipment.

The agency or agent of the agency shall provide all other equipment and staff necessary to conduct the performance test.

The amendment adds a statement that the MPCA will provide all other equipment and staff necessary to conduct the performance test. This is in response to comments from the TAC, who felt that the rule should indicate that

the MPCA would be responsible for paying for the testing activities other than those arising from existing Items A-D. This addition is a reasonable interpretation of the existing rule.

The MPCA's authority to enter a facility and conduct a performance test was questioned on the grounds that it was unreasonable to expect the facility to cease normal operation and operate at any conditions that the MPCA may dictate. Also, questions were raised about the limited liability that the facility would have for the safety of the personnel conducting the test. A requirement for the MPCA to notify the facility a minimum number of days in advance of testing was suggested. MPCA staff acknowledged these problems but have not reworded the existing language as it is still needed to provide that, in exceptional circumstances, the MPCA may need to commission a testing company to conduct a performance test with minimal notice to the emission facility, on the same principle that there need be no notice prior to an inspection of the facility by MPCA staff.

PART 7017.2030 PERFORMANCE TEST PRETEST REQUIREMENTS.

Subpart 1. Notification of Testing.

This replaces Minn. Rules pt. 7005.1860, subp. 6.

The requirement that 30 days advance notice of testing remains and the discretionary acceptance of shorter notice is also retained from the original rule. A 30 day notice is reasonable as there needs to be enough time between the notice and the performance test date in order to schedule and conduct a pretest meeting, order U.S. EPA audit samples if applicable, review the test plan and make arrangements to witness the performance test.

There are instances where it is difficult for a source to give an accurate test date 30 days in advance. For example, asphalt plants and some other batch

operators have difficulty in scheduling a performance test at specific operating conditions so far in advance as their production is variable on a day to day basis or may be affected by weather conditions. In such cases a shorter notice will be accepted if all the pretest requirements of the rules can be met. Shorter notice will be accepted if the test plan has already been approved and/or a pretest meeting has already been held. For example, a rescheduled test will not require a further 30 days notice.

The provision to reject a performance test if less than 30 days notice was necessary in order to enforce the 30 day minimum and clarify that it will be required unless the commissioner gives written approval, in advance, of a shorter period. There have been actual cases in the Air Quality Division where a performance test has been rejected due to no notice being given or inaccurate notification being given. Such cases negate the MPCA's policy of witnessing performance tests where possible, the requirements to test at specific conditions, and the issuing of audit samples to verify laboratory accuracy.

The notification must be in writing in order to show a permanent record. The rule defines the 30 day period as starting from either the postmarked date of the letter or the receipt of notice at the MPCA, whichever is the sooner. Receipt of notice at the MPCA includes hand delivered letter, telephone call or fax transmittal. Initial notification by telephone must be followed by a written confirmation. The written notice is required as sources may deal with several contacts at the MPCA and have often given test notification by telephone to the wrong person. Such notification is normally passed onto the Compliance Determination Unit (CDU), but this cannot be guaranteed. A written record of the notification will serve to prevent unnecessary rejection or questioning of performance test results in the event that the notification did not reach the CDU and provides the regulated party with proof of proper notification. The

wording of this subpart is consistent with the federal NSPS test notification requirement given in 40 CFR 60.8(d), which gives as the reason for requiring this notice, "the opportunity to have an observer present".

Subpart 2. Submittal and Approval of Test Plan.

This subpart tells the owner or operator of the emission facility what procedures to follow in order to get approval to use a test plan for a planned performance test. The test plan must be submitted with the written test notification or earlier. This is reasonable as MPCA staff need time to review the test plan and advise changes or write changes in advance of the pretest meeting, which is typically held two to three weeks after the test notification. It is also necessary that the test plan be submitted with enough time between the notification of testing and the pretest meeting so that MPCA staff may request that the test plan be resubmitted if it is insufficient to ensure that the performance test will meet the objectives of the MPCA and/or of the owner or operator. This is reasonable as a badly planned test may have to be repeated in order to demonstrate compliance. In certain circumstances, for example if MPCA staff have very specific requirements, MPCA staff may write part of or the whole test plan. It is reasonable that a test plan written by MPCA staff should be the overriding document as the performance test is conducted to show compliance with MPCA requirements. The test plan, irrespective of its author, is subject to discussion at the pretest meeting.

This subpart requires the owner or operator to submit a test plan at an earlier time if MPCA staff request this information in order to provide supplemental information during the permit application process. This is reasonable as issuance of a permit is dependent upon the facility's ability to demonstrate ongoing compliance with the applicable emission limits. In cases where complex test protocols need to be applied or if testing for pollutants

where no EPA approved test methods are available, it may be desirable and necessary for the owner or operator to propose a test plan that will satisfy the performance test provisions of a draft permit. This will help to ensure that a suitable testing protocol is available at the design stage rather than requiring costly modifications at a later stage in order to accommodate performance test requirements.

It is anticipated that with this time frame and the use of standardized letters, written approval of the test plan will in many cases be made at the close of the pretest meeting. In order for MPCA staff to give written approval of the test plan, the test plan must contain sufficient detail to ensure that the test requirements of the proposed rule are met. This includes all the elements of subpart 3 and satisfying the need to test at conditions that will demonstrate compliance for all normal operating conditions. The approval must be in writing to ensure that only authorized staff can approve the test plan, to ensure that performance tests are not performed with partial or no approval, and to ensure that a specific test plan and amendments are followed where rewriting was necessary.

Currently, the test plan is produced by MPCA staff following test notification and discussed at a pretest meeting, in person or by telephone. This leaves little time for resolving technical issues. The new procedure is reasonable as the owner or operator of the emission facility is the most appropriate person to determine what operating conditions are representative of normal operation of the emissions unit. It will also allow for the approval of a test plan at the pretest meeting, giving more time than previously for the owner or operator to plan the performance test around the normal operating schedule.

MPCA staff have produced test plan templates for various industries to speed up the test plan writing process. The test plan format in the proposed rules is based on the templates and the templates will be available to the owner or operator or consultants involved in writing a test plan. Most of the testing companies that conduct performance tests in Minnesota are familiar with the test plan format through attending pretest meetings and following the plans during actual tests. As these companies are already submitting proposals to emission facilities for the purpose of making a contract to test, it is anticipated that some or all would be able to put these in test plan format if the owner or operator of the emission facility requested the additional technical help.

Subpart 3. Format and Content of Test Plan.

This subpart lists the elements and format required to submit a test plan to the MPCA for review. It is reasonable to define a standard format as this speeds up the review process, a benefit to all parties.

Item A lists general information that identifies where the performance test will take place, why the test is being conducted, the name and telephone number of the test coordinator at the emission facility, and a schematic drawing of the emission point and sampling ports, which is needed for AQD staff to determine that the performance test will meet the requirements of reference method 1. This is reasonable as it identifies the specific emissions unit to be tested, so that the test plan can be readily checked against the compliance schedule that required it, and the information is easily gathered. No requirement to give a test date is included, thus allowing the test plan to be submitted earlier than the required notification date in order to gain pre-approval.

In Item B, a list of the pollutants to be tested and a list of the appropriate emission limits is asked for. The owner or operator can find this in the applicable compliance document, federal regulation, Minnesota rule or

statute, and it is reasonable to require the owner or operator to check that all the pollutants required to be tested are included. Similarly, a description of the proposed method of fuel sampling and analysis is required where applicable and is reasonable as the potential emissions may vary widely depending on choice of fuel and, if the dirtiest fuel is not used, then an operating condition may be imposed to prevent the emissions unit being operated with a fuel giving increased emissions over that tested. Fuel sampling results are particularly important where emission limits are based on heat input or output or where fuel results are accepted in lieu of test results in order for MPCA staff to determine compliance. For example, a coal fired dryer is assumed to be in compliance with sulfur dioxide limits when burning coal with less than a given content of sulfur.

Item C contains a list of what is required to demonstrate that the performance test is conducted at the required conditions. The owner or operator must propose the operating conditions for the performance test and compare these to the normal range of operating conditions. In addition, a description of how the operating conditions will be monitored and reported is required. This is reasonable as the proposed rules require that a performance test is conducted at certain conditions, and that the conditions tested will become the basis of operating limits. Therefore, MPCA staff must be able to determine the actual operating conditions. It is in the interest of the owner or operator to make a clear proposal here because, if during or after the actual performance test it is discovered that the performance test is not conducted consistently with these requirements the performance test may have to be repeated, at the expense of the owner or operator.

Item D states that a list is required which includes the proposed test methods to be used, the number of test runs per performance test for a given pollutant, details of any amendments from the method that are required by the

MPCA or requested by the owner or operator of the emission facility, and, if a method other than a defined reference method is proposed, a statement of applicability (i.e. detection limit and accuracy) for the method under the proposed conditions. This is reasonable as, although all of the reference methods are accepted for use as intended, not all methods are applicable to all situations and AQD staff should have final say on the approval of methods for use in a performance test to demonstrate compliance. As some methods are subject to amendments by Minn. rule, such as those given in pt. 7017.2060, it is reasonable that the amendment is referenced in the test plan so that AQD staff can ensure that all parties are aware of the required protocol before the performance test commences. The same applies to amendments required under federal rules or compliance documents and in general a test result will not be accepted for determining compliance if the amendment was not observed.

Item E lists the information needed for MPCA staff to ensure that a performance test conducted to determine the relative accuracy of a CEMS will meet the required criteria for acceptance of the results. This section is included in the proposed rules so that these rules can be applied to the submittal of a test plan for certification of a CEMS.

Subitem 1 of item E requests the unit basis under which the CEMS will be certified to be listed. This is included to ensure that the CEMS will be certified under the same unit basis, such as pounds per hour, in which the applicable emission limit is expressed. By including this in the test plan, MPCA staff can ensure that the owner or operator is aware of the requirement. Under subitem 2, it is reasonable to require that the owner or operator provides the span value for the CEMS in order to determine that the span value has been calculated in accordance with federal regulations and because the span value is used in a calculation that quantifies the performance of the CEMS. Subitem 3

requests identification of the data recording system(s) that will be certified. This ensures that all parties are aware of the specific system(s) that will be certified and ensures that the owner or operator has made a decision on which systems will be certified and which will not. Also, MPCA staff need to know, when reviewing performance test results relating to a relative accuracy test, which recording system is to be compared to the reference method results. Confusion may occur if, for example, a CEMS uses both a strip chart and a data logging system and MPCA staff do not know which system is certified and which provides back-up data only.

Subpart 4. Pretest Meeting.

Pretest meetings, or an equivalent telephone discussion, are an important tool for ensuring that tests are planned and conducted under appropriate conditions so that the performance test will not be rejected due to misunderstanding or lack of knowledge of the procedures required by the MPCA for conducting valid performance tests. They are useful forums for discussing complex test plans, resolving disagreement over procedures, communicating the MPCA's reasons for certain requirements, and answering questions regarding performance testing and the implications of noncompliance. The meetings usually include a technical and/or production representative from the emission facility, a project manager from the testing company, and a performance test specialist from the MPCA staff. The assigned MPCA permit engineer may attend and, if any enforcement issues are involved, the assigned Enforcement Unit staff person will attend. In order to formalize the process, the MPCA proposes to include the pretest meeting requirements in the rules. The pretest meeting requirements are reasonable as it is important that the owner or operator understands the requirements of the MPCA in order to conduct a performance test that will be acceptable for demonstrating compliance.

This subpart states that the owner or operator must contact the Supervisor of the CDU to set up a pretest meeting. If done at the same time as the notification of testing this does not require any additional submittals to the MPCA. It is reasonable that the meeting be at least seven working days before the actual performance test date in order to give time to modify a test plan, if necessary, and to give written approval of the test plan if the approval cannot be given at the end of the meeting. In unavoidable circumstances and where a short notification of testing was accepted, a pretest meeting may be held closer to the performance test date. If the emissions unit has been tested previously under the same conditions or if the performance test is not complex or controversial, a pretest meeting may be held by telephone conference call. It is reasonable to add these provisions to cut down on unnecessary travel and expense for the emission facility when there are no major issues or objections to discuss. In emphasis of the importance of the pretest meeting this subpart states that a performance test may be rejected if the owner or operator fails to comply with the requirement to be involved in a pretest meeting when requested.

PART 7017.2035 PERFORMANCE TEST REPORTING REQUIREMENTS.

Subpart 1. Submittal of Performance Test Results.

This subpart defines the owner or operator of the emission facility as responsible for the timely submittal of a complete test report as defined in Subpart 2. It is reasonable to do this as there have been cases where reports are submitted late, or not submitted at all, because the responsible party at the emission facility has assumed that the testing company would forward a copy to the MPCA, or for other reasons. As the owner or operator of the emission facility has to sign the report to certify that the stated operating conditions reflect the actual conditions then it is reasonable to expect that person to forward the report to the MPCA in a timely manner.

It also requires that a report be submitted for any performance test that was conducted, regardless of the results or whether the performance test was actually completed. This is reasonable as for any performance test that was started there must be either sufficient information to make a compliance determination or documentation of any reasons why a test report should not be used for determination of compliance (e.g. due to breakdown or malfunction, adverse weather conditions or other unavoidable circumstances that caused a performance test to be abandoned or its results to be non-representative of normal operating conditions). A test report is evidence of the conditions of a test whether or not the test was completed.

An early draft of the rule stated that all test results, whether or not they were conducted for compliance purposes, should be submitted to the MPCA. The TAC commented that this was unnecessary for performance tests that were not required by the MPCA or intended for submittal to the MPCA and that it would create unnecessary workload for MPCA staff. MPCA staff agreed and reworded this section of the rule. When MPCA staff needs to investigate a facility's emissions, the MPCA can always request these test records under Minn. Stat. §116.091 (1992).

Subpart 2. Submittal Schedule.

The submittal schedule defines when and to whom the complete report should be submitted for review by the MPCA.

This subpart requires the report to be submitted within 45 days of completing the performance test. The 45 day period is from the date of completion of the performance test (field sampling) to the submittal date, which includes the postmarked date of the package in which the report is sent so that postal delays do not cause a violation of this subpart. A different schedule may be required or allowed in the applicable compliance document. Where additional time is needed, for example due to the need to subcontract laboratory

work for complex analytical procedures, an extension may be allowed if the owner or operator of the emission facility applies for an amendment to the applicable compliance document. The TAC was asked if 45 days was a reasonable schedule and the representatives of testing companies felt that it was reasonable for most criteria pollutants (particulate matter, sulfur dioxide, nitrogen oxides) but may not be practical for air toxics, metals and volatile organic compounds testing where the laboratory work is more complex and where some testing companies need to subcontract the analysis. For this reason, compliance documents can allow longer time periods for submittal of test results, as needed.

A microfiche copy of the report is required to be submitted within 60 days of the deadline for submittal of the hard copy of the test report. This proposal was first discussed at a meeting between the MPCA and several testing companies on February 25, 1992, where test report format was discussed. The aim of this meeting was to communicate the AQD's needs relating to the content of reports. The testing companies recognized the storage problems arising from submittals of over 200 reports every year, a number that is expected to increase steadily each year. Alternatives such as requiring that both sides of the pages of reports be utilized and provision for electronic submittals were discussed but the microfiche submittal was the most practical. As reports contain many diagrams and tables and because not all testing companies use the same computer system, electronic submittal is impractical. Since that meeting, Exhibit C was updated to include a requirement to submit a microfiche copy. The additional cost is offset at least in part by no longer requiring that two copies of every report be submitted, as was previously the case. Microfiche copying is not expensive, currently the cost is 7 cents per 8.5 x 11 inch page when using the State Department of Administration-Micrographics Section. The majority of

reports contain less than 100 pages. The 60 day additional time limit is generous as turnaround at the Micrographics Section is three to five days normally. During the period of months where a microfiche copy has been requested based on the Exhibit C requirement, there have been no formal complaints about the cost of this requirement.

This provision will allow the MPCA to store and retrieve test reports much more easily and efficiently, overcoming some of the problems caused by the large number of test reports submitted each year. There is no available space to file these reports efficiently. This restriction has caused delays in finding old reports and some have been misplaced. With this new procedure in place, the review process will be carried out using the hard copy of the report and, once the report is reviewed and the microfiche copy is submitted, the original will be recycled except for the key pages (results summary and certifications), which will be retained in the MPCA correspondence files.

Subpart 3. Complete Report.

This subpart outlines the minimum content of a test report. The format is based on U.S. EPA guidelines and is reasonable as it contains all of the elements needed for the MPCA to review and verify the results, to check that the test plan was followed and to determine the compliance status of the emission facility.

The format is similar to that used by most of the testing companies that conduct performance tests in Minnesota. Although the format of these reports is generally satisfactory, they often do not contain all of the necessary data. Documentation of process conditions and complete calculations are the items most frequently missing. By including a minimum format in the rule, MPCA hopes that most of the reports submitted will contain all of the required data at the first attempt. This will speed up the review process, benefiting all parties.

Item A specifies that the cover page shall contain an identification of the emissions unit tested, its location, the date of the test, and the name and address of the testing company that conducted the performance test. This is reasonable as it is the minimum amount of information needed for filing and identification of the report.

Item B references pt. 7017.2040 for the requirement to provide certifications by key persons that the test report accurately represents the actual conditions and results of the performance test. The reasonableness of these certifications is explained under that part. It is reasonable to include these in the report as they provide a permanent record of the certification of that report.

Item C states that the introduction shall contain an explanation of why the unit was tested, citing the compliance document, federal regulation, or Minnesota rule or statute, that generated the performance test or any other reason for testing. A description of the test location, process unit, the test dates, pollutants tested and the name of any observers and coordinators shall be included. Any other important information, such as deviations from the test plan, should be mentioned here. This information is needed, and is reasonable, so that compliance can be determined against the correct compliance schedule and/or emission limit and so that the conditions of the performance test can be verified by the observers and coordinators if necessary.

A summary of results is required by Item D. This shall list the results from all the methods employed, in the same units as the applicable emission units and in any intermediate units. These should be tabulated and listed with the applicable emission limits for an initial check on the compliance status for each pollutant. A summary of the process data must be included so that a comparison can be made with the test plan requirements. This is reasonable as

the summary is used to quick check the results and prioritize the report for review. As the proposed rules allow the emissions unit to be run at the tested rate until compliance is determined, and beyond if compliance is confirmed, the prioritizing of reports must reflect this in that those indicating noncompliance will get higher priority.

Item E requires a report of the operation of the emissions unit to include a description of the process and control devices, a flow diagram, actual process data to support the record of operating conditions, any specially requested information needed to demonstrate adherence to the test plan. All of these requirements are reasonable as the information is needed in order to determine that the performance test was done according to the approved test plan.

Item F asks for a description and schedule of any maintenance work done on the process or control equipment done during the month prior to the performance test. This is reasonable as extensive maintenance or replacement of major parts just prior to a performance test may not be conditions for testing that are representative of normal facility operation and maintenance.

Item G requires a description and diagrams of the sampling point and equipment to verify that the sampling location met the requirements of reference method 1 and that the appropriate sampling methods were used. Any deviations from the standard methods should be explained and, if a method other than a defined reference method was employed, a statement of the accuracy and detection limit of that method under the conditions of the performance test must be given. These requirements help to verify that the performance test was conducted according to the approved test plan and with adequate quality control.

The appendix, as defined in Item H, includes all of the data, calculations and calibrations that are needed to check and verify the results and process data given in the summary. Example calculations must be given so that the

results can be recalculated and checked from the raw data. The raw field data must be included to verify that the quality assurance requirements of the methods were followed. The chain of custody record is important in verifying the report as evidence of the compliance status of an emission facility in that there must be an accurate record of who handled the samples and when they were analyzed.

Item H requires that raw production data be included, for example copies of actual strip charts and records of process throughput. This verifies the process summary and certification of process conditions. The results of equipment calibrations (pitot tubes, meter boxes, nozzles, thermometers and barometers and any other equipment that is required by the reference methods to be calibrated) shall be included in the report to verify that the equipment was within the required specifications. A list of project participants, including both the testing company and emission facility staff shall be included as these people must be available to verify that the conditions of the test were as reported. Any other notes made in the field, such as those recorded in a test log shall be included as a record of the field conditions.

Item I specifies that any special requirements of the test plan, compliance document, federal regulation or Minnesota rule or statute relating to the performance test must be included in the test report. This is a catchall provision that covers any unique circumstances that may apply to a facility, such as special operating parameters or conditions.

PART 7017.2040 CERTIFICATION OF PERFORMANCE TEST RESULTS.

Subpart 1. Certification Required.

In the absence of a laboratory certification program or a means of eliminating potential conflict of interest situations when a testing company is contracted to conduct a performance test or if an emission facility is allowed

to conduct some of its own testing, the purpose of this part is to provide a greater emphasis on the validity of performance test data. Individual liability is identified in the four critical areas of data validation; the field sampling, the analysis, the report compilation, and the operating conditions at the emission facility. This is reasonable as the categories of people selected to certify certain parts of the testing are those whose positions imply such responsibility. For example, the team leader of the testing personnel conducting the field sampling has implied responsibility for the work of the team as a whole. The certification requirement is reasonable as it increases confidence in test results as a means of determining compliance, particularly in situations where conflict of interest could occur and where MPCA staff were not able to observe the performance test. MPCA observers have seen cases of misrepresentation of field data as collected during field sampling and these certifications could help the MPCA in following up and identifying responsibility in these type of cases.

Subpart 2. Certification of the Sampling Procedures.

This requires a certification for the field sampling. The team leader of the field sampling team must certify this part of the testing, verifying that the data in the report is complete and accurate. This is reasonable as this person is in the best position to, and has responsibility for, verifying the data collected by the team of samplers.

Subpart 3. Certification of Analytical Procedures.

In a manner similar to the certification of the field sampling, the person responsible for the analytical procedures employed upon the field sampling must certify the results of that analysis. That person would normally be the laboratory manager of the testing company or of a company contracted by the testing company to conduct analysis. In some cases, where a portion of the

analysis was contracted out, both of these people will need to provide a certification. As the staff of a contracted laboratory would not usually see a copy of the test report itself, the certification requires them to certify only the data presented to the testing company for use in the report. The person making the certification in subp. 4 is then responsible for ensuring that the analytical information is represented completely and accurately in the test report. This subpart is reasonable as it commits the analytical laboratory to following the quality assurance requirements of the test method and its own quality assurance policies, thus providing an extra element of confidence in the results.

Subpart 4. Certification of the Test Report by the Testing Company.

The test report is generally compiled and checked by staff at the testing company that are equally or more senior than the team leader of the sampling team. It is reasonable that this person take responsibility for ensuring that the report is a true representation of the data collected from the performance test.

Subpart 5. Certification of the Test Report by the Owner or Operator of the Emission Facility.

It is important that the conditions at the emission facility be accurately documented so that appropriate operating limits can be imposed if necessary and so that MPCA staff can determine if the approved test plan was followed. The owner or operator, or an assigned staff person of equivalent seniority, should take responsibility for ensuring that the appropriate conditions are met and accurately recorded. This certification is reasonable as the operating conditions at the emission facility have a large effect on the level of emissions and must be verified in order for the results of the performance test to be meaningful and useful in ensuring continued compliance.

PART 7017.2045 QUALITY ASSURANCE REQUIREMENTS.

The TAC had several comments on the quality assurance requirements of this part and helped to shape the final version of it. With technical input from the TAC, the part is structured to define the basic requirements and defines the exceptions that are acceptable. These will be discussed in more detail. The overall approach is reasonable as the quality assurance requirements are based on the requirements of the test methods and related U.S. EPA documents or are designed to clarify the test plan procedures that the MPCA expects to be followed.

Subpart 1. Witnessing.

The observation of performance tests by MPCA staff is an essential quality assurance procedure and currently is the only means of determining the quality of testing done by testing companies. An audit of the Air Quality Division, conducted by Project Environment Foundation (PEF) recommended that the proportion of witnessed performance tests should be much higher (70% compared to the figure then of around 33%). MPCA staff have been working towards increasing this figure to about 50%, staff believes to be a realistic target. The need to observe performance tests is the basis in part of other sections of the proposed rules, for example the requirement for a 30 day notice of testing is based on the need to schedule and prioritize in advance which performance tests will be witnessed. It is therefore reasonable to include in the rules a statement that any performance test may be witnessed by staff of the MPCA or the U.S. EPA. EPA staff occasionally witness performance tests in Minnesota when they have an interest in the results, for example if the emission facility is subject to an EPA consent order.

Subpart 2. EPA Audit Samples.

The EPA issues a range of audit samples for use in assessing the validity of results from performance tests. These are samples of known

concentration of pollutants that are collected and/or analyzed in conjunction with the field samples for specific pollutants. It is reasonable to expect the owner or operator of the emission facility to ensure that the independent testing company analyze these samples in accordance with EPA protocol as the reference methods include the provision for analysis of audit samples. This subpart makes the owner or operator of the emission facility responsible for the costs of returning the audit samples when the sample is a reusable gas cylinder. This is a reasonable provision as these cylinders are expensive to replace and need to be insured and transported safely. The auditing procedure is considered as part of the overall cost of testing and EPA pays only for the transport of audit cylinders to the emission facility.

Subpart 3. Quality Assurance.

This states that performance tests shall be conducted while observing at least the minimum quality assurance requirements of the test method as given in the text of the method. This is reasonable as failure to follow quality assurance procedures given in a method may adversely affect the precision or scope of the method and the results may not provide an accurate indication of the compliance status of the emission facility.

The owner or operator must submit a written request for any intended deviation from the quality assurance procedures outlined in this subpart. The deviation cannot be allowed if the emission facility is subject to federal regulations but will otherwise be considered on a case by case basis. Subpart 4 defines the limits for deviation from test methods, test plans and quality assurance requirements and a performance test will be rejected if deviations occurred in excess of those allowed under Subpart 4. The reasonableness of the deviations allowed under Subpart 4 will be explained under that part of this Statement.

Items A and B give some additional, specific quality assurance requirements which the MPCA believes necessary to be stated on the basis of experience.

Item A states that all test runs for a given pollutant must be completed within a 24 hour period unless the test method requires runs of three hours or greater or if process conditions make this impractical. This is necessary as conducting a performance test over more than 24 hours introduces more variables into the results. For example, shift changes and weather changes can have a significant effect on the way some processes operate and so should be minimized. The provision is reasonable as it contains flexibility where there is no practical way to comply and it would usually be less expensive to conduct the performance test within a short period of time rather than employing a testing company for several days.

Item B prohibits the owner or operator or employees of the emission facility from operating or assisting in the sampling and analyzing procedures of the performance test. This is reasonable as the testing company is responsible for conducting the performance test accurately and without bias and the emission facility staff cannot be considered to be neutral in respect of the outcome of the test.

Subpart 4. Deviation From Quality Assurance or Test Method.

In response to the TAC's comments that early drafts of the proposed rules were inflexible in that a performance test could be rejected for any deviation at the discretion of MPCA staff and did not allow for the realities of field sampling conditions, this subpart was added to define the range or type of deviation that can occur without risk of voiding the results.

Specifically, this subpart states that any deviation from the test plan, test method or the quality assurance requirements of the rules will result in rejection of the results unless Items A, B, C or D apply.

Item A allows deviations if they were approved in writing prior to the performance test. The owner or operator of the emission facility must notify the MPCA at the earliest opportunity of any intended changes so that a written approval or denial can be given, thus eliminating the element of discretion in accepting or rejecting the results during or after the performance test.

Item B allows minor deviations from a test method if they can be proven not to have adversely affected the precision or scope of the method under the sampling conditions that were encountered. Therefore, procedures that actually improve the precision of the performance test will not cause rejection. However, if the deviation violates federal requirements for the test method procedure, the deviation will not be allowed. This is reasonable as only the EPA may allow deviation from federally mandated test procedures. This item is reasonable as the wide range of field sampling conditions makes it impossible to exactly reproduce all procedures in all circumstances but deviations can only be allowed if they do not significantly affect the results. If a performance test cannot be conducted without unacceptable deviation then an alternative procedure must be proposed.

Item C allows deviations from the test method that were necessitated by field conditions and are allowed within the text of the test method or under the quality assurance procedures of the test method. This is a reasonable clarification of the flexibility allowed within individual test methods that have been approved for use during a performance test.

Item D deals with deviation from an approved test plan. In effect this says that a performance test will be accepted if it was conducted within operating limits that are acceptable and maintainable when written as an amendment to the applicable compliance document and provided that the compliance status can be determined under the conditions of the performance test. This item applies only

to the operating conditions part of the test plan. If the methods were not performed correctly, then the performance test may still be rejected subject to item B or C. The operating limits will be imposed pursuant to pt. 7017.2025. This is reasonable as it allows for a performance test to proceed even if the planned operating conditions cannot be achieved, thus providing the owner or operator with the opportunity to test and continue to operate at the tested rate rather than facing the expense of canceling the performance test and retesting. In some cases the operating conditions may not be allowable as an amendment to the compliance document or the tested conditions may be too limiting for the owner or operator to continue to operate, in which case another performance test should be arranged within the applicable deadline.

Subpart 5. Precision of Test Methods.

The purpose of this subpart is to state that, when a reference method is used during a performance test, the compliance status will be based on the actual test results with no adjustment for the inherent margin of error associated with that method. For example, if a method has a quoted accuracy of plus or minus 10 percent and the test result is 5 percent above the applicable emission limit, a determination of noncompliance will be made although it may be argued that the "true" result was lower than the applicable limit. This is reasonable for U.S. EPA reference methods as federal and state emission standards are set with specific reference methods in mind. Therefore, the emission limit already allows for the standard level of error in a method and the result of the performance test is the determinate of compliance with no adjustments necessary. Non-reference methods that have been proposed in an emission facility's test plan and approved by the AQD should also be subject to this provision as the owner or operator has, through the test plan review and pretest meeting processes, the opportunity to discuss the use of alternate or

equivalent test methods and to ensure that the performance test is conducted with appropriate accuracy.

This subpart contains a provision that the result of a test run will be rejected if conducted without the required accuracy for the method as employed in the given sampling conditions. For example, omission of required quality assurance procedures or equipment settings outside the specified range would lead to the rejection of a test run. If more than one test run was rejected, the performance test result for the affected pollutant would be rejected. Also, if the detection limit of the method as performed was not below the applicable emission limit, the affected test runs will be rejected. This is reasonable as it is not possible to determine compliance with an emission limit if the test method cannot detect the pollutant at or below the level of the emission limit.

These provisions for rejecting test results are reasonable as any increase in the error or uncertainty of the test method can have a large effect on the results and so the results cannot be considered to be true indicators of the compliance status of a facility. The emission facility will be assigned a status of "indeterminate compliance" for any pollutant where the performance test result was rejected and a retest will be required in order to determine the actual compliance status. Approximately 10-15% of performance tests were rejected and assigned "indeterminate compliance" in 1992. Many of these were rejected due to unacceptable errors in the test methods or other deviation from the test plan.

Subpart 6. Adjustments for Detection Limit.

Following the provision in Subpart 5 that the detection limit of the chosen test method must be below the applicable emission limit, this subpart gives the authority to require the test method to be amended to increase the detection limit by increasing the volume of sample volume, which can be achieved

through longer test runs or faster sampling rate. The equation shows the relationship between sample volume, detection limit and stack emission limit or expected emission rate. This equation can be applied to any test method and will be used as a check for approving the use of test methods for pollutants such as trace metals when the owner or operator of the emission facility submits a test plan for approval. The owner or operator is already required, through other parts of the proposed rule, to submit a statement of the accuracy and detection limit of any proposed method that is not a reference method as defined in these rules.

The equation was submitted by the TAC member from Braun Intertec. It is used by the California Air Resources Board (CARB) to define the minimum sample volume for CARB Method 428 (section 2.1.3), a method used to determine dioxin and furan emissions. As the principle is applicable to all stack sampling methods, it has been incorporated into the proposed rule as a general provision. This provision is reasonable as the compliance status of the emission facility cannot be determined if the test method used does not show whether the actual emissions were above or below the applicable emission limit. By ensuring before the performance test that a sufficient detection limit is attained, the owner or operator will be at less risk of having to repeat the performance test due to an indeterminate compliance status.

PART 7017.2050 PERFORMANCE TEST METHODS.

Subpart 1. Test Methods.

This replaces pt. 7005.1860, subpart 2.

The existing rule gives a list of test methods to be used to determine compliance with various pollutants. There are two flaws in this arrangement. The list is not complete and it becomes quickly outdated as the EPA continues to develop and refine test methods. For example, only method 7 is given for

Nitrogen Oxides (NOx) determination. Under this rule, methods 7A, 7B, 7C, 7D and 7E could not be used unless approved by the commissioner. The proposed rule would give the owner or operator of the emission facility the choice of any of these methods for a nitrogen oxides performance test for inclusion in the proposed test plan. So method 7E, which is an equivalent method for general use in nitrogen oxides testing and which is already being utilized for compliance purposes, could be proposed and would be routinely approved as part of the test plan. The MPCA still needs the authority to deny use of a test method as some equivalent methods are not designed for general use. For example, Method 7C is applicable only to fossil-fuel fired steam generators, electric utility plants, nitric acid plants or other specific sources as given in federal regulations (reference: 40 CFR 60, appendix A, Method 7C, 1.1 Applicability).

The amendment to this subpart deletes the list of test methods and incorporates by reference the current sources of those methods (40 CFR 60, appendix A; 40 CFR 61, appendix B and 40 CFR 51, appendix M). Those sources contain the reference methods that are equivalent to those in the original list and additional methods for pollutants not referenced in the original list or the current rules. As U.S. EPA promulgated these methods for performance testing against federal standards and Minnesota standards and limits are based on or derived from federal standards, it is reasonable to incorporate the methods as a whole so that the owner or operator of an emission facility that is to be tested has the full range of methods to select from and which will include methods available for testing air pollutants for which there are currently no applicable standards or emission limits.

This amendment also references pt. 7017.2060 as the source of specific requirements or amendments of reference methods. These are general requirements and do not replace any amendments that already exist in applicable standards of

performance in Minnesota rules. Therefore, there is no change in the basis of the emission limits within those standards as a consequence of writing general requirements. For example, some emission limits include condensible particulate matter as part of total particulate matter limits so the conditions for the extra analysis are retained in pt. 7005.0500. When federal emission limits apply, the proposed rules do not require an amendment to the method but the pretest, reporting, and quality assurance requirements of the proposed rules still apply. For PM10 determination, where no current performance standards or amendments exist within the performance standards, Minnesota rules, pt. 7017.2060 specifies minimum sample volume, length of run and basis of determination of compliance with applicable emission limits.

Subpart 2. Alternative or Equivalent Test Methods.

This replaces pt. 7005.1860, subp. 3.

The general scope of the subpart remains the same. The word "equivalent" is added to the heading so that the terms "alternative" and "equivalent" both appear in the text of the subpart. These terms refer to alternative and equivalent methods as defined in pt. 7005.0100. An alternative method is not a reference method (in practice, often a NIOSH or OSHA method) but a method which can be demonstrated to provide results adequate for determining the emissions of a given pollutant such that a determination of compliance can be made. An equivalent method is a method that has been proven to give results with a consistent, known relationship to the results from the applicable reference method. Generally this means a second reference method that can be used as an equivalent to the method listed in a performance standard, for example using 7E rather than method 7 for determination of nitrogen oxides.

The limitation that the subpart does not apply to performance tests conducted subject to federal regulations has been added because if the federal regulation requires that the determination of an air pollutant be performed by

specific methods then only EPA, and not the MPCA, has the authority to accept an alternative or equivalent method or procedure if such a change goes beyond that which is acceptable according to the text of the rule, regulation or method.

Item A has been amended so that the approval of a minor change is dependent on its having no adverse effect on the precision or scope of the test method as applied to the case in hand. This means that any change that makes the method less accurate or which excludes some of the pollutants of concern is not a minor change and will not be accepted. The text of the method itself is the primary reference for determining what changes, modifications or omissions are allowable. This is reasonable as any change other than a minor change could increase the error in the results to a level where the compliance status of the emission facility cannot be determined.

Item B, as before, gives the MPCA the authority to approve an equivalent method, which is defined in pt. 7005.0100, subp. 11 (1991). As subpart 1 of this proposed part now allows for a greater automatic choice of reference methods, this item now applies to fewer methods, such as OSHA and NIOSH methods that are alternatives to or equivalent to EPA methods.

In Item C, the MPCA may approve an alternative method as defined in pt. 7005.0100, subp. 3 (1991).

PART 7017.2060 PERFORMANCE TEST PROCEDURES.

Subpart 1. Applicability.

This applicability statement is needed as several existing performance standards within Minnesota rules, chapter 7005, contain some specific amendments or requirements for using certain test methods. These vary between the standards. For example, some require a minimum sample volume of 30 dscf for method 5 test runs while others require 32 dscf. Other variations in items such as sampling rate, run time and temperature settings, exist within those

standards. The original intent of the proposed rules was to simplify the performance testing requirements throughout chapter 7005 by centralizing them in a new rule and deleting the original requirements. However, this proved to be a more complex issue than first thought as it would have meant standardizing the amendments and requirements. The TAC group objected to some of these changes as a change in the test procedure, however small, can have an effect on the end results and in extreme circumstances could bring an emission facility into noncompliance. The most contentious issue was the inclusion of condensible particulate matter for all total particulate matter testing.

The TAC also pointed out that the emission limits were written into the standards with the use of particular test methods (eg. method 7 for nitrogen oxides) in mind. By removing the lists of test methods from individual standards and giving an increased choice of methods in the new rules, the link between emission limit and test method would have been lost. Therefore, MPCA staff decided not to remove these lists and the amendments in the existing standards take priority over the amendments in the proposed rule. Similarly, performance tests subject to federal emission limits, such as New Source Performance Standards (NSPS) will be performed with priority given to the specific amendments or requirements given in the federal testing requirement. In general, the test requirements of the proposed rule follow the federal model as closely as possible. However, where there is a need to amend a method to reflect additional requirements of Minnesota's emission limits or where clarification is needed due to confusion in the regulated community, these items have been incorporated into the rules.

Subpart 2. Sample Port Location.

Method 1 is the reference method used to determine whether or not the location of the sampling ports is acceptable and it is therefore reasonable that the test port location conform to this. In addition, this subpart states that the sampling location for each pollutant be the same during a performance test. This is reasonable as, in order to test for two pollutants at the same time there should only be one location for a set of sample ports, otherwise the presence of a probe in the stack may upset the flow at any sampling point downstream of the gas flow and therefore introduce errors. This provision also ensures that associated data such as flow measurement, moisture content and molecular weight determination, are all determined from the same portion of the stack.

Subpart 3. Total Particulate Matter Determination.

Item A states that the minimum sample volume for a method 5 test run is 32 dscf and the minimum length of the test run is 60 minutes. The length of test run is consistent with federal NSPS regulations in Code of Federal Regulations, title 40, part 60, where a one hour test run is usually required, although some standards require longer test runs. A run time of one hour is the accepted norm amongst the regulated community and their consultants. It provides a time scale for testing that allows for completion of testing within a day and allows enough time to sample from the required number of traverse points in the stack, for example 24 traverse points sampled for 2.5 minutes each or 12 traverse points sampled for 5 minutes each.

These same standards generally specify a minimum sample volume of between 30 and 32 dscf, unless a longer test run is required. It is reasonable to define one minimum volume in order to set a consistent value and avoid confusion in planning or reviewing performance tests. The higher sample volume has been

incorporated into the proposed rule as this will ensure that the minimum will always be achieved, whether the federal minimum is 30 or 32 dscf. There should be no technical difficulties that would make 32 dscf any more difficult to attain in practice than is 30 dscf.

Item B applies unless the emissions unit meets the provisions of Item C. Item B requires that the test runs for method 5 shall include determination of organic condensible particulate matter. The inclusion/exclusion of organic condensibles has been a contentious issue in air quality regulation for some time. A review of the Minnesota standards of performance in chapter 7005 shows that those emission limits based on pts. 7005.0450 to 7005.0520 (the standard for industrial process equipment) do include organic condensibles and a protocol for determining this fraction of the particulate matter is included in that section of the rules. However, a few other standards reference the emission limits given here, for example the standard for "existing asphalt plants" is based on those limits and so includes organic condensibles. However, the emission limits for "new asphalt plants" are based on separate standards which do not include organic condensibles. The proposed rules defer to the performance standards and federal regulations so the need to test for organic condensible will be based on those standards. If the emission limit is not based on a Minnesota standard of performance or a federal regulation, the need to test for organic condensible will be based on this proposed subpart. The emission limit will be assumed to include organic condensibles unless Item C applies. Item B also requires that the results be expressed as total particulate matter including and excluding organic condensibles. This is reasonable as the ratio of the results will help determine if testing for organic condensibles will be required in subsequent performance tests.

Item C gives an exemption to the requirement to test for organic condensibles where it can be shown that the emissions unit is not a source of organic condensible particulate matter. Such proof can be given by mass balance calculations or previous test results on the emissions unit or on similar units operating under similar conditions. This is reasonable as it would be an unnecessary expense for the owner or operator to test for organic condensibles if there is strong evidence showing that they are not emitted from the emissions unit. If there is insufficient proof, the initial performance test for total particulate matter would have to include an analysis of organic condensibles but, if this performance test shows that they are not present in a significant quantity, there would be no need to test for these in subsequent performance tests. This is reasonable as the extra cost is not large when compared to the overall cost of the performance test and it would only be incurred once.

Subpart 3. PM10 Determination.

Item A defines the minimum sampling time as 60 minutes and the minimum sample volume as 32 dscf. These are reasonable as they are consistent with the requirements for total particulate matter sampling. A one hour run is the minimum needed to get a reasonable time for sampling at each traverse point (there can be up to 24 traverse points required, or 2.5 minutes per point). In practice, the requirements of the test methods for PM10 (methods 201 and 201A) lead to test runs being greater than one hour in length. Typical test run times are 80-90 minutes. As the sampling rate for PM10 methods is about the same as for total particulate matter, the same minimum sampling volume has been specified.

Item B requires the inclusion of condensible particulate matter (in this case organic and inorganic condensibles combined) with the results of PM10 tests. Methods 201 and 201A, the reference methods for PM10 determination, both

state that the EPA considers that condensible particulate matter is PM10, although those methods do not include the protocol for determining condensible PM10 emissions. EPA promulgated method 202 in 1991 for the purpose of determining condensible PM10 emissions in conjunction with methods 201 and 201A. As the reference methods consider the condensible particulate matter to be part of the total PM10 emissions, it is reasonable to stipulate that all emission limits for PM10 include condensible PM10 emissions. However, as not all sources are necessarily a source of condensible PM10, it is reasonable that the MPCA include a provision to waive the requirement to perform method 202. This is given in Item E. Item B specifies that method 202 shall be used to determine emissions of condensible PM10 and that the test report shall summarize the PM10 results including and excluding the condensible fraction. This is reasonable as the ratio of condensible to total PM10 can be useful information in determining if the method 202 test is needed in subsequent performance tests and may give useful emissions data for the emissions unit.

Item C enforces the reasoning given above that all PM10 emission limits include condensible particulate matter. It states that the compliance status of the emission facility will be based on this fact. This is reasonable as the compliance status should be determined on the same basis of the emission limits and, through Item E, it will not be required that sources not emitting condensible particulate matter should test for it. This exemption will not affect the determination of compliance.

Item D allows for the use of the method 5 procedure referenced in subpart 3 for determining organic condensibles for PM10 tests if it can be demonstrated through mass balance calculation or previous performance test results that inorganic condensible particulate matter accounts for less than 5% of the total or if there are technical limitations that negate the use of method 202. This

is reasonable as the method 5 protocol does not determine inorganic condensible and therefore should not be used where these are emitted in a significant amount. MPCA staff consider that 5% is the upper limit in allowing this as it is approximately half, or less, of the likely percentage error in PM10 testing. There may be cases where method 202 cannot be applied. For example, it requires the use of a glass lined probe and glass lined probes have an upper stack temperature limit for use. In such cases it will be reasonable to use the method 5 condensibles protocol as this will measure some, if not all, of the condensible PM10.

Item E allows for conducting a PM10 test without doing a condensible particulate matter determination if mass balance calculations or previous performance test results show that the emissions unit is not a source of condensible PM10. This is reasonable as performing method 202 is a needless expense if there is strong evidence showing that condensible PM10 is not emitted from the emissions unit. If there is insufficient proof, the initial performance test for PM10 would have to include an analysis for condensible PM10 but, if this performance test shows that it is not present in a significant quantity, there would be no need to test for these in subsequent performance tests. This is reasonable as the extra cost would only be incurred once.

Subpart 5. Opacity Determination by Method 9.

This, in conjunction with subpart 6, replaces the existing rule, part 7005.1860, subpart 7. The requirements for opacity testing are made more clear, particularly where they relate to compliance with opacity excursion limits, which are additional, higher opacity limits above the standard for specified times. Also, the quality assurance requirements have been expanded and clarified. This subpart applies only to determination of opacity by method 9.

All additional methods or requirements are in subpart 6. The wording in Minn. Rule pt. 7005.1860, subpart 7, regarding not reading the portion of a plume where condensed, uncombined water vapor is present has been deleted as this is an integral requirement of the reference method and the quality assurance requirements associated with the reference method, which need not be repeated here.

Opacity readings are to be taken by a certified observer from a testing company. This is reasonable as Eastern Technical Associates (ETA) offers opacity certification and formal training in Minnesota every six months and, given the technical considerations and the importance of observing the exact methodology, it is necessary that anyone reading opacity must have been certified within the previous six months. It is also consistent with the requirements of method 9. All MPCA Air Quality Division inspectors and stack test observers are required to attend the certification every six months. Any staff person without recent certification is not allowed to take readings at an emission facility. Consistent with pt. 7017.2020, subpart 2, the observer must be from a testing company unless otherwise approved in a compliance document.

Item A specifies that the referenced EPA document is the basis of quality control that will determine if an opacity test can be accepted for the determination of compliance of an emission facility. This document is used by ETA as the basis of its formal training program and all attendees receive a copy. As all certified observers should possess this document, it is reasonable to use it as the basis of acceptability of method 9 tests. Issues such as weather conditions and relative position of the observer during a test are covered in this document and quality assurance guidelines are given.

Item B states that one series of readings is required for each condition that is required to be tested. For example, if an emission facility is required to test for opacity in conjunction with particulate matter emissions testing at two different operating conditions, two full sets of opacity readings will be required. This is reasonable in order to determine compliance at both conditions. However, if one condition is known to be worst case condition, only that condition would need to be tested. This item does not mandate that opacity must be read at all conditions tested, its purpose is to state that a full set of readings is necessary for each determination required by the applicable compliance document, federal regulation, or Minnesota rule or statute.

Item C contains language retained from pt. 7005.1860, with the addition of a sentence to say that compliance with the opacity standard according to a CEMS record shall be based on the procedure in subpart 6. This clarifies how the data will be used. The reasonableness of these procedures will be explained under subpart 6. This item means that, if the owner or operator fails to conduct an opacity test as required or if the opacity test fails to demonstrate compliance, the owner or operator may submit transmissometer (opacity CEMS) results in support of a claim that the emission facility was actually in compliance with the opacity limits. Such results can be used to support that claim but they will not be accepted as conclusive evidence. This is reasonable as the CEMS results should be acceptable only if the use of the CEMS for demonstration of compliance was part of the test plan submitted to and approved by the MPCA. In order to use these results as evidence, the owner or operator is required to prove that the instrumentation meets Performance Specification 1, which is in 40 CFR 60, appendix B, and which gives the requirements for certification of an opacity CEMS. This is reasonable as the CEMS must be proved to have been accurate at the time of the test. Such proof consists of test

results that have been submitted to the MPCA and which were current and valid at the time of the performance test. Any sign of tampering with the results will invalidate the CEMS data unless the owner or operator can prove that the tampering did not occur. The wording of this item is consistent with that in 40 CFR 60.11(e)(1).

Item D is consistent with the statements under pt. 7017.2025 that emission limits do not apply under the conditions listed in this item unless otherwise specified in the applicable compliance document, federal regulation, or Minnesota rule or statute. It is repeated here to avoid confusion as the requirements of opacity testing sometimes differ from the use of other test methods.

Item E explains how data from opacity test runs will be reduced to determine compliance with the applicable limits. This is the procedure given in method 9, but additional explanation is given here for clarity and to describe how an exceedance of the standard will be quantified and expressed as a violation. This defines a standard procedure where previously there was some ambiguity in the rules. The procedure is consistent with the practices of the Air Quality Division Enforcement Unit. Compliance with opacity limits, other than excursions, is determined on the basis of a six minute average (any set of 24 continuous readings taken at 15 second intervals). Therefore, a 60 minute minimum total continuous reading time is reasonable as it provides up to ten 6 minute averages on which to determine compliance and at least 60 minutes is needed to determine compliance with an excursion limit that is expressed as an exceedance of the opacity limit for a number of minutes per hour. Federal NSPS requires three hours of opacity reading for initial compliance of affected sources and each one hour period is subjected to this data reduction process.

Where opacity excursions are allowed in a compliance document or Minnesota rule or statute no violation of the six minute average is recorded unless the excursion limit is also exceeded. This is explained further under subpart 6.

Subpart 6. Additional Opacity Data Reduction Procedures.

This subpart applies to data reduction procedures not included in method 9, namely data reduction for CEMS and data reduction for excursions above the opacity standard allowed for a specified time period.

Item A applies to reduction of CEMS data. As a minimum, CEMS opacity data is reported as a series of one minute averages, which are the average of at least six readings per minute. Therefore, the six minute average, on which compliance with an opacity standard is based, is defined as six consecutive one minute averages rather than as a specified number of consecutive readings. Other than this difference in averaging, compliance is determined and expressed in the same manner as method 9 data. This gives good consistency in approach for the two sources of data. As with method 9 data, there is no violation of the standard if excursion limits apply and those limits are not exceeded. This is explained under item B.

Item B replaces the wording of the existing rule, pt. 7005.1860, that relates to the determination of compliance with opacity excursions, usually one or more periods of four minutes in an hour where an exceedance of the baseline opacity limit is allowed, for example an additional four minutes of up to 40 percent opacity and a further four minutes of up to 60 percent opacity. The existing language has, in practice, been difficult to apply in determination of compliance or in enforcement actions as it is open to interpretation. The new language is based on the wording of the emission limit excursions within the relevant performance standards and is written as a step by step procedure for determining compliance with that standard and quantifying the extent of the

violation if a determination of noncompliance is made. An earlier draft of this wording was based on a July 1992 draft version of proposed reference method 203B. MPCA's draft language was reviewed by Mr. John Summerhays of EPA Region V prior to its inclusion in PM10 Exhibit 2, a document similar to Exhibit C, that is attached to PM10 State Implementation Plan (SIP) orders. Some amendments were made as a result and Mr. Summerhays made final comments on the language on August 14, 1992, after which the language was incorporated into Exhibit 2. The review stated that the wording was a reasonable interpretation of the state rules. Some further amendments have been made which now retain the one minute averaging procedure of the existing rules rather than defining a one minute average as any four data points within an hour. This is reasonable as it stays within the scope of the existing rules while clarifying the requirements and the procedure can still be used as before for data reduction of CEMS readings.

These excursion limits only apply if there is an exceedance of the opacity standard based on a six minute average. This is not stated in the existing rules but it is a reasonable interpretation as the excursions are intended to make the opacity standard less stringent rather than to add additional limits. Therefore, there is no need to calculate any one minute average if there are no six minute averages above the standard. The one minute average is reasonably defined as the average value (sum of the values divided by the number of readings) of all the readings required to be taken in a minute (four readings for method 9, six for CEMS data). All of the one minute averages calculated from the total data must be non-overlapping but the data used to calculate six minute averages can be used to calculate one minute averages. This is reasonable as it ensures that each data point is used only once to determine compliance with the excursion limits and although the data used for six minute averaging is used again, the same data point will not be used to express a

violation of both types of average. One minute averages can be taken from within a six minute average data set as the purpose of the one minute averages is primarily to confirm or override the existence of an exceedance of the standard, not to create an additional violation.

Subitem 1 of item B gives the procedure for comparing the results against the excursion condition when there is only one excursion condition. The number of one minute averages exceeding the base standard and the number of one minute averages exceeding the excursion opacity limit is recorded. If any one minute average is higher than the excursion opacity limit and/or if the total number of one minute averages that are higher than the base standard exceeds the number of minutes that the excursion is allowed, then the excursion opacity limit has been exceeded and the violation of the standard is confirmed. This is a reasonable interpretation of the existing rule and is consistent with the way that the enforcement unit reduces such data.

Subitem 2 gives an equivalent procedure for determining compliance when there are two excursion conditions, an upper and a lower limit. The procedure given here is based on the wording of the excursion limits in Minnesota rules and is also reasonable in that it is easier to start with the highest one minute average and work in descending order. Also, if the highest one minute average is higher than the upper excursion limit, there is an immediate indication that the results show noncompliance with the standard. In descending order, the data is compared to the upper excursion opacity limits, and the total allowed time of the excursions. The procedure is reasonable as an exceedance of any one of these will confirm a violation of the base standard. Again, the procedure is a reasonable interpretation of the existing rule and is consistent with the way that the enforcement unit reduces such data.

Finally, subitem 3 describes how the reduced data from this item will be used to express a violation of the standard. If the excursion limit is exceeded by any amount as determined under this item, the violation is expressed as the number of non-overlapping six minute averages as determined for the method 9 or CEMS data, which is consistent with the procedures in subpart 5 and item A of this subpart, and therefore reasonable. In addition, the number of one minute averages that do not overlap with each other or with the data used to determine a six minute average above the standard, that exceed the excursion limits are added to the expression of the violation. This is reasonable as it gives additional quantification in order to express the relative extent of the violation.

Subpart 7. Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans Determination.

This defines a minimum sampling rate, run time and sample volume for a performance test using method 23, the reference method for this category of pollutant. The minimum are reasonable as they are consistent with federal recommendations and are necessary to ensure that enough sample is collected for analysis. The requirement for longer test runs when low resolution mass spectroscopy is used for the analysis procedure is necessary as that technique is less sensitive than other recommended techniques and a greater amount of sample is needed to exceed the detection limit. The requirement for longer test runs pursuant to pt. 7017.2045, subp. 6, remains in effect.

V. SMALL BUSINESS CONSIDERATIONS IN RULEMAKING

Minn. Stat. §14.115, subd. 2 (1992) requires the MPCA, when proposing rules which may affect small businesses, to consider the following methods for reducing the impact on small businesses:

a. The establishment of less stringent compliance or reporting requirements for small businesses;

b. The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;

c. The consolidation or simplification of compliance or reporting requirements for small businesses;

d. The establishment of performance standards for small businesses to replace design or operational standards required in the rule; and

e. The exemption of small businesses from any or all requirements of the rule.

The proposed rules may affect small businesses as defined in Minn. Stat. §14.115 (1990). As a result, the MPCA has considered the above listed methods for reducing the impact of the rule amendments on small businesses. As the intent of the rule is to clarify the MPCA's requirements and eliminate inconsistencies, the MPCA considers that there will be a benefit to all businesses, and particularly small businesses which are less likely to employ trained environmental staff.

The provisions of the rule that will be beneficial to small business are mainly those concerned with test method selection. The rule will allow increased choice of test methods for demonstration of compliance, allowing for the choice of less expensive test methods. For example, the restriction that method 25 should be used in preference to method 25A for expected VOC concentrations above 50 ppm, as contained in Exhibit C, has been removed. Method 25A is less expensive than method 25 and therefore preferred by small businesses. Additionally, an exemption to the requirement to conduct an analysis for condensible particulate matter from total particulate matter and PM10 has been added. Therefore, a small business that can demonstrate that it is not a source of condensible particulate matter need not incur the cost of that part of the test.

Small businesses or businesses with financial difficulties have tended to have the greatest difficulty in planning a performance test 30 days in advance

due to intermittent or variable production levels. These considerations will be taken into account when MPCA staff decide if a test notification of less than 30 days is acceptable.

There are only two areas which may increase the burden on small businesses; the requirement that the emission facility submit a test plan with the test notification and the requirement for all communications with the agency to be in writing. Small businesses are more likely to rely on their consultants, at extra cost, for producing a test plan. However, MPCA staff will provide technical assistance and templates so that small businesses can produce as much of this document as possible. The proposed rule allows, and MPCA staff encourage, the owner or operator to submit a test plan well in advance of the test, even if the test has not yet been scheduled. This will allow smaller businesses time to draft a test plan for review by MPCA staff. It will also allow MPCA staff time to assist the owner or operator in completing or correcting the test plan. By submitting a test plan well in advance, smaller businesses can make use of the experience of MPCA staff rather than using a consultant. The need for written copies of all notifications, submittals and approvals has been explained in the text of this SONAR. MPCA staff does not see this as a large burden; instead, it requires organizational skills rather than financial outlay.

Other than the points discussed, the proposed rule should have little or no effect on small businesses as it follows current rules and procedures, only in a clarified and more consistent manner. Finally, the burden on any given business is more a function of the emission standards applicable to it than of the performance test requirements. That is, the more pollutants regulated under the applicable standard, the more testing is likely to be required.

VI. CONSIDERATION OF ECONOMIC FACTORS

In exercising its powers, the MPCA is required by Minn. Stat. §116.07, subd. 6, (1992) 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 which may result therefrom, and shall take or provide for such action as may be reasonable, feasible, and practical under the circumstances.

In proposing the rule amendments to update and make consistent the performance test requirements, the MPCA anticipates little or no change in the overall costs to Minnesota businesses. The requirement of businesses to submit test plans may produce some additional consulting fees but the MPCA has produced test plan templates to reduce this cost. The opportunity to choose from a wider range of test methods and to apply for exemptions to certain testing requirements will also offset any cost increases.

This rule, therefore, does not have a significant economic impact on Minnesota businesses.

VII. IMPACTS ON AGRICULTURAL LAND

Minn. Stat §14.11, subd. 2 (1990) requires that if the agency proposing the adoption of a rule determines that the rule may have a direct and substantial adverse impact on agricultural land in the state, the agency shall comply with specified additional requirements. The MPCA, in proposing a rule to set out performance test requirements, is not proposing a rule which may have a direct and substantial adverse impact on agricultural lands in the state, because the rule applies to stationary sources of air pollution and does not directly impact agricultural lands in the state.

VIII. COSTS TO LOCAL PUBLIC BODIES

Minn. Stat. § 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 public bodies in the state in either of the two years immediately following adoption of the rule. This rule updates and consolidates the procedures for conducting performance tests, but does not affect the currently required frequency of tests over that currently in place under compliance documents, federal regulations, and Minnesota statutes and rules. Thus, it does not impose additional testing costs on local public bodies.

The requirement to submit a test ~~test~~ plan in addition to the notification of testing could, potentially, incur increased consulting fees. However, as MPCA staff will make available test plan templates, on request, to testing companies or any person arranging to conduct a performance test, and as the required data is mostly contained in the applicable compliance document, this cost is avoidable. Also, MPCA staff believe that any increased consulting fees would be small when compared to the overall cost of a stack test. As the potential increased costs are small, and as this rule contains increased choice of test methods, providing for potential cost savings, MPCA staff anticipate no significant cost increases to public bodies resulting from the new rules.

IX. LIST OF WITNESSES AND EXHIBITS

A. Witnesses

In support of the need for and reasonableness of the proposed rule amendments, the following witnesses will testify at the rulemaking hearing:

1. Stuart Arkley, Pollution Control Specialist, Compliance Determination Unit, AQD. Mr. Arkley will testify on the detail and technical aspects of the rule.

2. Ann Foss, Supervisor, Compliance Determination Unit, AQD. Ms. Foss will testify on the overall need for the rule and the implementation of the rule.

B. Exhibits

1. Summary of EPA test methods. Title 40 (revised August 17, 1992). This lists amendments to, and the addition of, new reference methods since the current performance test rule was promulgated.
2. Exhibit C (revised June 4, 1992), which will no longer apply to new or existing permits when the new rules come into effect.

X. CONCLUSION

Based on the foregoing, the proposed amendments to the state air pollution control rules to update the requirements for performance testing and amend related definitions and standards of performance, attached to this Statement of Need and Reasonableness, are both needed and reasonable.

Dated: March 24, 1993

Charles W. Williams
Commissioner