STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendment of Minn. Rule APC 29, Standards of Performance for Grain Handling Facilities, to be Recodified and Retitled 6 MCAR §4.00291, Standards of Performance for Dry Bulk Agricultural Commodity Facilities

STATEMENT OF NEED AND REASONABLENESS

I. INTRODUCTION

The Minnesota Pollution Control Agency (Agency) has proposed to adopt amendments to Minn. Rule APC 29 (APC 29), Standards of Performance for Grain Handling Facilities. The rule will be recodified, in accordance with the Minnesota Code of Administrative Rules (MCAR), as 6 MCAR §4.00291, and retitled "Standards of Performance for Dry Bulk Agricultural Commodity Facilities." The Agency proposes to accomplish the amendment by repealing APC 29 and replacing it with 6 MCAR §4.00291.

The Agency has prepared a list of the exhibits which support the proposed amendments. The exhibit list is appended to this document. The exhibits are available for review at the Agency's offices at 1935 West County Road B2, Roseville, Minnesota.

The purpose of this document is to describe the proposed rule amendments, demonstrate the legal authority of the Agency to adopt the proposed rule amendments, demonstrate the need for the proposed rule amendments, demonstrate the reasonableness of the proposed rule amendments, and, pursuant to the requirements of Minn. Laws 1983, ch. 188, entitled "Small Business Considerations in Rulemaking," to document how the agency has considered the methods for reducing the impact of the proposed rule amendments on small businesses.

II. DESCRIPTION OF THE PROPOSED AMENDMENTS

The existing Minn. Rule APC 29 (Exhibit 1) establishes standards of performance for grain handling facilities with respect to particulate matter emissions. The control requirements established in the rule differ for different facilities, depending on geographical location, grain throughput, and whether the facility is existing or new.

The amendments to the rule expand the coverage of the rule to include all dry bulk agricultural commodity facilities. However, the proposed amendments do not, in general, significantly alter the control requirements placed on existing facilities which are now regulated under the existing rule.

The majority of the proposed amendments to the rule involve changes in or additions to the standards of performance established by the rule.

The first change in standards of performance involves issues relating to housekeeping practices. Section (b)(1) of the existing rule requires maintenance of "good operating and housekeeping practices" at all times. 6 MCAR §4.00291 B.1. maintains the concept of the original rule but sets forth with more specificity what actions are necessary. The owner or operator is required under the proposed amendments to clean up commodities spilled on facility property "as required to minimize fugitive emissions to a level consistent with reasonably available control technology." "Reasonably available control technology" (RACT) is defined in the definitions of the rule amendments and takes into account technological and economic feasibility. This section of the rule amendments also requires the owner or operator to maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed.

The second change in standards of performance involves the incorporation by reference of the New Source Performance Standards adopted by the U. S. Environmental Protection Agency (EPA) for grain terminal elevators and grain storage elevators. These two terms are also defined in the definitions of the proposed rule as amended.

Several changes are proposed within the rule concerning which facilities are required to control particulate emissions from their operations. As in the existing rule, determination of whether control is required is based on geographical location, population density, commodity throughput, and whether the facility is new or existing. For purposes of clarity, this information is presented in the form of a chart, which appears as Exhibit 6 MCAR §4.00291-1. For facilities located in the Minneapolis-St. Paul Air Quality Control Region, for facilites located in a city with a population of 7,500 or more, or with an annual commodity throughput of more than 180,000 tons, controls are required on both existing and new facilities. For facilities with an annual commodity throughput of 120,000 to 180,000 tons and located in a town with a population of less than 7,500, installation of control equipment is not required for existing facilities but would be required on new facilities. A facility which does not fall into one of the descriptions given above would not be required to install control equipment, regardless of whether the facility is new or existing. The proposed descriptions contain changes to the existing rule, increasing the population-size cut-off and increasing the throughput cut-off.

The amended rules establish a different type of control standard for facilities which are required to install control equipment. The existing rule requires the application of induced draft to all sources of particulate emissions and the conveyance of the particulate matter through control equipment. The requirement to apply induced draft has been replaced by limitations on visible emissions (opacity) on various operations at commodity facilities. Under the proposed amendments, fugitive particulate emissions from truck unloading, railcar loading and unloading, and handling operations are limited to five percent opacity. Fugitive emissions from truck loading cannot be greater than ten percent opacity, and emisssions from barge and ship loading or unloading are limited to twenty percent opacity except during trimming or topping-off operations. The control equipment which is installed at commodity facilities to remove the particulate matter captured at any of the emission sources must meet the emission limitations established in Minn. Rule APC 5, Table 2. This is a minor change from the existing rule, which offered an option of meeting either a percent removal (e.g., 99 percent by weight) or the requirements of Tables 1 or 2 in Minn. Rule APC 5. The proposed rule as amended also contains a specific opacity limitation on emissions from control equipment.

The proposed amendments also establish minimum operational requirements for facilities which are not required to control emissions. These operational requirements involve activities such as limiting the free fall distance of a commodity being loaded into a vehicle, and the measures undertaken to comply with these requirements will be judged as being adequate only if they are consistent with RACT.

The amendments do not affect the provisions of Sections (f) and (g) of the existing rule ("Exceptions for Grain Dryers" and "Nuisance"), which are retained in the rule.

III. LEGAL AUTHORITY TO ADOPT THE PROPOSED AMENDMENTS

The Agency is authorized by Minn. Stat. §116.07, subd. 4 (1982) to adopt, amend, and rescind rules for the prevention, abatement or control of air pollution. That statute provides, in relevant part:

> 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, Chapter 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, 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.

"Air pollution" is defined as follows:

> "Air pollution" means the presence in the outdoor atmosphere of any air contaminant or combination thereof in such quantity, of such nature and duration, and under such conditions as would be injurious to human health or welfare, to animal or plant life, or to property, or to interfere unreasonably with the enjoyment of life or property.

Minn. Stat. §116.06, subd. 3 (1982). "Air contaminant" or "air contamination" is defined to mean:

> [T]he presence in the outdoor atmosphere of any dust, fume, mist, smoke, vapor, gas, or other gaseous, fluid, or particulate substance differing in composition from or exceeding in concentration the natural components of the atmosphere.

Minn. Stat. §116.06, subd. 2 (1982).

Minn. Rule APC 29 was adopted for the purpose of controlling particulate emissions into the ambient air from grain handling facilities. The rule as amended will continue to restrict the emission of particulate matter into the air from these facilities and from other facilites which are dry bulk agricultural commodity facilities.

The facilities regulated by the rule as amended would be described as emission facilities. These facilites are defined to include:

> [A]ny structure, work, equipment, machinery, device, apparatus, or other means whereby an emission is caused to occur."

Minn. Stat. §116.06, subd. 5 (1982).

Based on the foregoing, the Agency has statutory authority to adopt the proposed amendments.

IV. STATEMENT OF NEED

Minn. Rule APC 29 was originally promulgated by the Agency on March 12, 1976. 1/ The need to adopt amendments to the rule arises from the following problems:

1) During the seven years since the adoption of the rule, the Agency has gained knowledge and experience in the regulation of grain handling facilities and other dry bulk agricultural commodities which generate fugitive particulate emissions. In addition, there have been advances in control technology for emissions from these types of facilities. These factors cause the existing rule to be somewhat outdated and in need of updating to take account of the advances in regulatory experience and control technology.

2) The Agency is being required by the U. S. Environmental Protection Agency (EPA) to revise the rule in certain

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1/ The published rule contains the date March 12, 1975. However, Agency rulemaking records indicate that the effective date of the rule was March 12, 1976.

respects.

These problems are described more fully below.

A. Need to Update the Rule

The Agency's experience with enforcing APC 29 has resulted in identification of certain ambiguities and inadequacies in the rule which need to be addressed.

There is ambiguity in the existing rule relating to the fact that many grain handling facilities include both grain processing equipment and grain handling equipment. The processing equipment is subject to the requirements of Minn. Rule APC 5, "Standards of Performance for Industrial Process Equipment." Existing APC 29 does not exclude from its coverage those portions of a grain handling facility which are devoted to processing. Because the requirements of APC 5 and APC 29 are not in all cases consistent, and because it is the Agency's intent that processing be covered by APC 5 and not APC 29, there is a need to amend APC 29 to clarify which operations of a facility are regulated by the rule.

Another problem with existing APC 29 relates to the fact that many of the products handled at grain handling facilities are not grain, even though they create the similar particulate emission problems. For example, screenings, dust, and midds are derived from grain but are not grain as such, and therefore they are arguably not covered by existing APC 29. Other products such as alfalfa products, soybean meal, and beet pulp pellets are not covered by the existing rule but should be because they are capable of creating particulate emission problems when handled. Therefore there is a need to amend the rule to expand its coverage.

Agency experience with enforcement of the existing APC 29 has shown that in some instances its requirements are overly stringent, considering the air quality benefit to be obtained versus the cost of control. The specific instances of this are explained in the Statement of Reasonableness. There is a need to amend the rule to relax those requirements which are overly stringent.

B. Need to Revise the Rule to Satisfy EPA Requirements

The involvement of EPA with the rule arises out of the requirements of the Clean Air Act (Exhibit 2). Pursuant to Section 109 of the Act, federal ambient air quality standards for particulates have been established to prevent the occurrence of adverse health and welfare effects. (See 40 C.F.R. §50.7.) 2/ Primary ambient air quality standards are set at levels to protect the public health while secondary standards serve to prevent all other adverse effects, such as injury to vegetation and livestock, property damage, and visibility reduction. The National Ambient

2/ The Agency has also adopted ambient air quality standards for particulate matter. These are set forth in 6 MCAR §4.0001 and, with respect to particulate matter, are identical to the federal standards.

Air Quality Standards (NAAQS) for Total Suspended Particulates (TSP) are set forth in 40 C.F.R. §50.7.

Section 110 of the Clean Air Act requires that each State submit to the Administrator of EPA a State Implementation Plan (SIP) which provides for implementation, maintenance, and enforcement of national primary and secondary ambient air standards in each air quality control region (or portion thereof) as needed. If the Administrator determines that the submitted SIP meets all applicable requirements, EPA adopts the SIP using federal notice-and-comment rulemaking procedures.

Once a SIP is adopted by EPA it is enforceable by EPA in accordance with Section 113 of the Clean Air Act. Specifically, if EPA finds a person to be in violation of a State rule which is part of an adopted SIP, EPA can take certain enforcement actions in the manner set forth in the Act.

Minnesota submitted its SIP to EPA in 1971, and at that time it was approved by the Administrator. Minnesota's SIP included all of the Agency's rules that were in place at that time. However, between 1971 and 1981, the Agency continued to adopt new rules and amend its old rules as a part of its efforts to attain and maintain federal and state ambient air quality standards.

One of the new rules adopted by the Agency was APC 29. The rule did not contain a limitation on visible emissions (commonly referred to as "opacity") but rather established an equipment standard: i.e., to apply "induced draft" on sources of particulate emissions within grain handling facilities. However, Agency inspectors frequently used opacity readings at these facilities as a guide to determining whether induced draft was being applied in an effective manner on sources of particulate emissions.

The Agency did not submit APC 29 to the Administrator of EPA for inclusion in the SIP until 1981. Prior to the approval of APC 29 by EPA, the only Agency rules within the EPA-adopted SIP which were enforceable against grain handling facilities by EPA under Section 113 of the Clean Air Act were Minn. Rule APC 11, "Restriction of Emission of Visible Air Contaminants," and Minn. Rule APC 6, "Preventing Particulate Matter from Becoming Air-Borne." Minn. Rule APC 11 establishes opacity limitations for any facility "for which a specific standard of performance has not been promulgated." (Minn. Rule APC 11 A.) EPA evidenced an active interest in the regulation of grain handling facilites in Minnesota, citing grain handlers for violations of APC 11. In this manner EPA became accustomed to using opacity limitations in Minnesota as an enforcement mechanism for grain handling facilities.

In 1978 EPA adopted, pursuant to Sections 111 and 301(a) of the Clean Air Act, New Source Performance Standards (NSPS) for Grain Elevators, 40 C.F.R. §§60.300 - 60.304. These standards contain opacity restrictions, evidencing further EPA's belief that opacity limitations are appropriate in the regulation of fugitive particulate emissions for grain handling facilities.

On January 23, 1981, as a part of an effort to update Minnesota's SIP, the Agency submitted APC 29 to the Administrator for approval. A part of EPA's review was to determine whether the new rule meets the requirements of Part D of the Clean Air Act. Part D establishes specific requirements concerning the development of the SIP for designated nonattainment areas in a state which will result in compliance with ambient air quality standards. The state must impose upon sources located in areas of the state which do not meet the ambient air quality standards (nonattainment areas) a requirement to install "reasonably available control technology" (RACT).

In reviewing APC 29, EPA apparently decided that the equipment standard included in APC 29 was not sufficiently enforceable to meet the requirement to impose RACT. However, EPA incorrectly assumed that the opacity limitations of APC 11 would continue to apply to grain handling facilities, and on that basis published a notice that it would approve the rule. In its Notice of Proposed Rulemaking dated November 20, 1981 (46 Fed. Reg. 57061, 57065) (Exhibit 3), EPA stated:

> EPA has reviewed this rule and determined that the particulate standards for grain handling facilities represent RACT. The opacity limits contained in APC-11 will be utilized in this rule.

During EPA's public comment period the Agency submitted a comment indicating that EPA's understanding was incorrect and that the Agency did not interpret the opacity limitations of APC 11 to apply to grain handling facilities. The Agency stated:

> Minnesota Rule APC 11 "Restriction of Emission of Visible Air Contaminants" sets forth opacity limitations for an emission facility for which a specific standard of performance has not been promulgated in another regulation. Since the MPCA interprets Minnesota Rule APC 29 as having a standard of performance requirement, the Agency contends it is that rule which is controlling rather than Minneasota Rule APC 11 for grain handling facilities.

Letter of J. Michael Valentine, Director, Division of Air Quality, Minnesota Pollution Control Agency, to Gary Gulezian, Chief of Regulatory Analysis Section, EPA, December 18, 1981. (Exhibit 4.)

The Agency's letter prompted discussions between EPA and Agency officials. EPA's position was that it would not approve the rule unless it contained opacity limitations because EPA did not believe it was otherwise sufficiently enforceable. During the discussions the Agency stated its intention to amend APC 29 to provide opacity limitations in certain portions of the rule. Based on this commitment, EPA published on May 6, 1982, a new notice of proposed rulemaking in which APC 29 was conditionally approved. (47 Fed. Reg. 19556.) (Exhibit 5.) The notice states that the condition could be satisfied in two ways:

1) The Agency could submit an amended APC 29 which contains specific opacity limits that are representative of RACT levels of control; or

2) The Agency could submit operating permits and/or

stipulation agreements for the grain handling facilities in the two nonattainment areas of Minnesota (the Twin Cities Metropolitan Area and the City of Duluth) which contain opacity limitations equivalent to RACT control levels.

The Agency has decided to proceed with the first option. Therefore the proposed rule amendments are needed to meet the requirements of EPA with respect to Minnesota's SIP.

V. STATEMENT OF REASONABLENESS

The discussion below addresses the reasonableness of each provision of the proposed rule amendments.

A. Definitions

Section A. of the proposed rule amendments defines fifteen terms used in other sections of the rule. These terms are discussed below.

1. "Capture system" is defined to make it clear that it refers to equipment used to capture particulate matter, such as hoods, ducts, fans and dampers. It is reasonable to define this term because it clarifies what types of systems are referred to in Section B.4. of the rule as amended.

2. "Column dryer" is defined in order to clarify which equipment must meet the performance standard established in Section B.5.a. of the rule as amended.

3. "Dry bulk agricultural commodity" and "commodity" are

defined to include grain, grain by-product, seed, beet pulp or pellets, and alfalfa meal or pellets. The effect of this definition is to expand the coverage of the rule to regulate the handling of commodities in addition to grain. This is reasonable because, as explained in the Statement of Need, many grain handling facilities handle a variety of dry bulk commodities in addition to grain. The commodities listed are handled with the same types of equipment as grain and generate particulate emissions when handled. Therefore it is reasonable to require grain handling facility operators to handle these other commodities in a manner that will prevent fugitive emissions. Facilities which do not handle grain but which handle the commodities listed in the definition use equipment similar to the equipment used at grain elevators. It is therefore reasonable to require these types of facilites to meet the same standards of performance which grain handling facilities must meet.

The definition of "commodity" does not cover some products which people may consider to be dry bulk agricultural commodities. Examples are salt and dry bulk fertilizer. However, it is reasonable not to include these products in the definition because they have handling requirements which are different than the products included in the definition. Fugitive emissions from these other types of products are required to be controlled pursuant to Minn. Rule APC 6, "Preventing Particulate Matter From

Becoming Air-Borne."

4. "Dry bulk agricultural commodity facility" is defined to make it clear as to which operations of a facility are covered by the rule. This definition is needed to address the problem previously described in the Statement of Need: that is, to clarify that only unloading, handling, cleaning, drying, storing, grinding, and loading operations are covered by the rule as amended. Processing operations, by not being included in the list, are not covered by the rule. This definition does not include, for example, the processing equipment found in flour mills, oil processing plants, alfalfa dehydrating equipment, sugar beet processing equipment, and other processing equipment. It excludes the roller mills, sifters, and purifiers at a flour mill.

Some equipment is not strictly processing equipment and not strictly handling equipment. For that equipment, its location and use will determine whether it is covered by APC 29 as amended or by Minn. Rule APC 5, relating to processing equipment. For example, hammermills would be covered by APC 29 as amended if they are located in a grain elevator or are part of the grain elevator. Cleaners located in a grain elevator and used as precleaners would be covered by APC 29 as amended, while cleaners indigenous to a flour mill operation would be covered by APC 5.

It is reasonable to define "dry bulk agricultural commodity facility" to clear up the ambiguity in the existing rule relating to its applicability to processing equipment. It is reasonable to apply these rules to facilities where commodities are loaded, handled, cleaned, dried, stored, ground, or loaded because these are the operations which are, if uncontrolled, likely to result in emissions of particulate matter.

5. "Grain" is defined to clarify the fact that the rule covers only corn, wheat, sorghum, rice, rye, oats, barley, flax, soybeans, and sunflower seeds. This is reasonable because these grains cause particulate matter emissions when handled.

6. "Grain storage elevator" incorporates into the rule the definition of "grain storage elevator" found in the EPA's New Source Performance Standards (NSPS) for grain elevators. This definition is set forth in 40 C.F.R. §60.301(b). (Exhibit 6.) It is reasonable to include this definition because section B.2. of the rule incorporates by reference the requirements of the NSPS.

7. "Grain terminal elevator" incorporates into the rule the definition of "grain terminal elevator" found in EPA's NSPS for grain elevators. This definition is set forth in 40 C.F.R. §60.301(c). (Exhibit 6.) It is reasonable to include this definition because section B.2. of the rule incorporates by reference the requirements of the NSPS.

8. "Handling operation" is defined to clarify which handling operations must meet the performance standards established in Section B.3. of the rule as amended.

9. "Loading station" is defined in order to clarify which operations must meet the performance standards established by Section B.3. of the rule as amended.

10. "Rack dryer" is defined in order to clarify which facilities must meet the performance standards established by Section B.5.b. of the rule as amended.

11. "Reasonably available control technology" is defined in order to clarify the degree of control required by sections B.1. and B.4. of the rule as amended. This definition is consistent with another Agency rule, 6 MCAR §4.0033, "Standards of Performance for Coal Handling Facilities Within Designated Areas." Section A.5. of that rule contains the same definition of RACT. It is reasonable to include this definition to aid both the public and the agency enforcement personnel in understanding the degree of control required by the rule.

12. "Throughput" is defined to provide a formula by which a facility's commodity throughput is determined. This is important because elsewhere in the rule throughput cut-offs are established in connection with control requirements. It is reasonable to include this definition to avoid disputes in the future as to how throughput should be calculated.

13. "Topping-off" is defined in order to clarify which operations during ship or barge loading or are exempt from the opacity limitation established in Section B.3. of the

rule as amended. This definition is reasonable because it describes the part of the loading operation when it becomes difficult, if not impossible, to control fugitive emissions during ship or barge loading. It describes the activity in enough detail to allow an owner or operator or inspector to clearly determine when topping-off is occurring.

14. "Trimming" is defined in order to clarify which operations during ship or barge loading are exempt from the opacity limitation established in Section B.3. of the rule as amended. This definition is reasonable because it describes the operations which are difficult, if not impossible, to control during ship or barge loading. It describes the activity in enough detail to allow an owner or operator or inspector to clearly determine when such an activity is occurring.

15. "Unloading station" is defined in order to clarify which operations must meet the performance standards established in Section B.3. of the rule as amended. It is reasonable to include this definition in order to aid the public in understanding the control requirements of the rule as amended.

B. Standards of Performance for Dry Bulk Agricultural Commodity Facilities

Sections B.1. throught B.5. of the rule as revised establish the standards of performance for dry bulk agricultural commodity facilities. These standards of performance are discussed below.

Section B.1. Housekeeping

Section (b)(1) of the existing rule requires maintenance of "good operating and housekeeping practices" at all times. Section B.1. of the rule as amended maintains the concept of the original rule but sets forth with more specificity what actions are necessary.

The owner or operator is required under Section B.1.a. of the rule as amended to clean up commodities spilled on facility property "as required to minimize fugitive emissions to a level consistent with reasonably available control technology." This requirement is reasonable because spilled commodities, if not cleaned up, can create a fugitive emission problem, either when blown by the wind or when disturbed by motor vehicles. The degree of control required is reasonable because it is is tied to RACT. RACT, by definition, takes into account technological and economic feasibility. This allows the smaller facilities to employ clean-up methods different from those that would be required of larger facilities with greater economic resources.

Paragraph B.1.b. of the rule as amended requires the owner or operator to maintain air pollution control equipment in proper operating condition and utilize the air pollution control systems as designed. This requirement is necessary because no benefit is obtained from air pollution control equipement which is installed but is not operated. The requirement is reasonable because in most cases the cost for operating and maintaining control equipment is low in comparison with the cost of installation. It is reasonable for existing facilities because it is not genuinely a new requirement, having either been already a requirement of any Agency permit issued to the owner or operator or else having been required by virture of the fact that shut-down or improperly operated equipment would have resulted in the violation of a performance standard of the existing rule.

Section B.2., Incorporation of the NSPS

Section B.2. of the rule as amended requires the owner, operator, or other person who conduct activities at a grain terminal elevator or grain storage elevator, of which construction, modification, or reconstruction commenced after August 3, 1978, to meet EPA's NSPS for those facilities. The NSPS were promulgated by EPA on August 3, 1978, and are set forth in 40 C.F.R. Sections 60.300 - 60.304. Exhibit 6 sets forth the NSPS and also discusses EPA's rationale for portions of the NSPS.

The NSPS restricts the particulate matter emissions allowed from both fugitive emission sources and point sources at those facilities that have large enough grain storage capacities to fall within the size restrictions specified in the definitions of grain terminal elevators and grain storage elevators. The affected facilities are required to meet opacity standards for fugitive emissions for each of the ten operations that may be found at these facilities. These opacity limits are based on the operating capability of a well-designed and well-operated grain facility. EPA has set forth the bases of these standards in a document entitled "Standards Support and Environmental Impact Statement, Volume 2: Promulgated Standards of Performance for Grain Elevator Industry" (Exhibit 7).

By letter dated September 1, 1982, EPA has delegated to the Agency the authority to enforce the NSPS for grain elevators. (Exhibit 8.) Because the Agency has been delegated this authority and is responsible for the enforcement of the NSPS, it is reasonable to incorporate by reference the provisions of the NSPS in APC 29 as amended. This incorporation by reference will notify the regulated public that the Agency is administering and enforcing the federal NSPS.

Section B.3., Commodity Facilities Requiring Control Equipment

Section B.3. of the rule as revised provides that a commodity facility that is not subject to the NSPS must be controlled if the facility meets one of the descriptions listed in Exhibit 6 MCAR §4.00291-1. The rule also establishes the standards of performance for those facilities which are required to be controlled.

In order to determine whether control is required on a facility it is necessary to look at the three descriptions listed in Exhibit 6 MCAR §4.00291-1.

The first description is: "Facility located in Minneapolis-St. Paul Air Quality Control Region or located in a city with a population of 7,500 or more or with annual commodity throughput of more than 180,000 tons." For these facilities, control is required regardless of when construction, modification, or reconstruction of the facility commenced.

The second description is: "Facility with annual commodity throughput of 120,000 to 180,000 tons and located in a city with a population of less than 7,500." If the construction, modification, or reconstruction of the facility commenced prior to Jaunary 1, 1984, no control is required. If construction, modification, or reconstruction commenced after January 1, 1984, control is required.

The third description is: "Facility with annual commodity throughput and location other than those described above." For these facilities, no control is required regardless of when construction, modification, or reconstruction commenced.

The existing APC 29 takes the approach of varying control requirements based on location and throughput. 3/ As explained above, this approach is maintained in the rule as amended. This approach is permissible under the statute which provides the

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3/ Exhibit 9 lists the number and location of grain elevators in Minnesota cities having a population of 2,500 or more and lists facilities with the potential for 180,000 tons annual throughput which are located in Minnesota cities having a population of less than 7,500.

Agency with rulemaking authority for these rule amendments. Minn. Stat. §116.07, subd. 4 (1982) provides that rules for the prevention, abatement, or control of air pollution of air pollution "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." This approach is reasonable because the problems caused by commodity facilities vary on thoses bases. The reasonableness of the three descriptions and the control requirements is discussed below.

Description Number 1

A facility falls into the first description, thus requiring controls whether it is new or existing, if it:

1. is located in the Minneapolis-St. Paul Air Quality Control Region, or
2. is located in a city with a population of 7,500 or more, or
3. has an annual commodity throughput of more than 180,000 tons.

The rationale behind the first two categories relates to the size of the populations. The Minneapolis-St. Paul Air Quality Control Region constitutes the state's largest population center, with 49 percent of the total state population compressed into 3 percent of the land area. A city with a population of 7,500 or more is also a large population center.

Agency ambient air quality monitoring data indicates that as the size of a city increases there is a greater concentration of air pollutants due to the resulting increase in industrial development (thus increasing the number of emission sources). Larger cities also have more concentrated traffic activity, which causes more particulate matter to be suspended in the atmosphere from the exhaust gases and the movement of vehicles. There is usually more road construction and maintenance in the larger cities. At these sites there can be digging, grading, sandblasting, and similar operations which allow the discharge of particulate matter into the air. Home heating plants also discharge particulate matter into the air, especially in recent years as woodburning stoves have become increasingly popular. Because of these factors, larger cities are more likely to experience problems with TSP levels. It is therefore of greater importance in larger cities that each source of emissions be controlled to reduce the amount of pollutants it contributes to the atmosphere.

In addition, where there are large populations, there is a greater number of people exposed to high TSP levels. As a city gets larger, it becomes more difficult for the individual to escape the effects of the high TSP levels. There is also a greater chance that as the TSP concentration increases in a larger city it is more uniform and widely spread throughout the city. This subjects the individual to high TSP concentrations for more hours during the day.

The facilities in the first two categories above are already required to be controlled by existing APC 29. Due to the potential in these population centers for increasing air pollution, it is reasonable to continue to require facilities in these locations to be controlled. However, there is a proposed change in the population size cut-off for the second category. The existing APC 29(c)(2) and (d)(2) requires controls on existing and new facilities located outside the metropolitan area but within cities with a population of 2,500 or more. This size cut-off is proposed to be changed to 7,500. The reasonableness of this change is discussed below.

Agency experience with enforcing APC 29 has shown that the rule is too restrictive in some cases. Small facilities located in cities with populations of 2,500 to 7,500 frequently have low commodity throughput and cannot support the high cost of control equipment required by the rule. In addition, those facilities are more likely to create nuisance problems than to cause violations of ambient air quality standards. Since the benefits from TSP reduction are small in these cases and the control equipment costs remain high, the requirement for controls on these facilities is not reasonable. As a result, in many instances, the Agency has not strictly enforced the existing APC 29 against these small facilities.

In order to eliminate the discrepancy between the rule requirements and enforcement realities, it is reasonble to increase the population cut-off from 2,500 to 7,500. Increasing the population size restriction does not render people in small towns unprotected from pollution. All of the cities in Minnesota under 7,500 population are now meeting the ambient air quality standards. In the few instances where there may be a local complaint of high fugitive emissions, the nuisance provisions of the rule (Section C. of the rule as amended) may be enforced to resolve the problem.

Regardless of location, under the amended rule a commodity facility is required to be controlled if it has an annual commodity throughput of more than 180,000 tons. The potential to discharge particulate matter into the air is directly proportional to the throughput of a facility. Even when located in small population centers, these large facilities have the potential to adversely affect air quality. They are quite often located outside city limits so that they can take advantage of rail spur availability. When located near a city, they can impact the city's air quality directly. Also, facilities of this size can afford to take pollution control measures due to their high throughput, which lowers the cost of pollution control per unit. Therefore it is reasonable to continue to require controls on these large facilities.

The 180,000 ton throughput cut-off represents a change from the existing APC 29, which sets certain control requirements based on a 4 million bushel (120,000 tons) throughput cut-off. 4/ Changing this throughput cut-off does not, however, remove control requirements from all facilities with annual throughputs of 120,000 to 180,000 tons. These fall under the second description contained in Exhibit 6 MCAR §4.00291-1, which is discussed below.

Description Number 2

A facility falls into the second description if it:

1. has an annual commmodity throughput of 120,000 to 180,000 tons, and
2. is located in a city with less than 7,500.

The question of whether the facility must be controlled depends upon the date on which construction, modification, or reconstruction of the facility commenced. If it commences after January 1, 1984, control is required. If it commenced before January 1, 1984, control is not required under Section B.3. However, some abatement of particulate emissions is required for these facilities under Section B.4, which is discussed later in this document.

4/ Throughput in the rule as revised is expressed in tons rather than in bushels, as in the existing rule. This change is reasonable because of the expansion in the coverage of the rule to include commodities other than grain, some of which are measured in tons rather than in bushels. The measurement of the quantity of grain handled is readily available in tons.

The provisions of this rule represent a change from the existing rule in that medium-sized facilities in smaller cities will have more stringent control requirements if they are built after January 1, 1984, than if they are existing on that date. It is reasonable to impose more stringent control requirements for new medium-sized facilities because a person planning to build such a facility will have advance warning of the design considerations and potential additional expense of installation of control equipment and can take those design considerations and expenses into account when building the facility. Because of the expense, it is not be reasonable to require existing medium-sized facilities in small cities to replace the control equipment which they installed under the existing APC 29.

Description Number 3

A facility falls into the third description if it has an annual commodity throughput and location other than the facilities covered by descriptions number 1 and 2. These facilities are required to abate particulate emissions to some degree under Section B.4. of the revised rule. The reasonableness of those requirements are discussed under the discussion of Section B.4.

Control Requirements

The owner or operator of a commodity facility must meet the applicable performance standards established in Sections 3.a. - d. of the rules as revised. Applicability of the performance standards, as discussed above, is determined by Exhibit 6 MCAR §4.00291-1. The reasonableness of these control requirements is discussed below.

Sections 3.a. - d. contain opacity limitations for various operations of commodity facilities. These opacity limitations replace the existing equipment standard which required the application of induced draft to sources of particulate emissions. As discussed in the Statement of Need at pages 9 - 14, the Agency needs to replace the induced draft equipment standard with specific opacity limits for these types of operations in order to obtain approval of the SIP.

The use of opacity limitations in place of the requirement to apply induced draft is reasonable because both EPA studies and Agency enforcement experience demonstrate that opacity limitations provide an objective compliance tool. Compliance can be evaluated with a high degree of accuracy and uniformity, whereas under the equipment standard of the existing rules, compliance determination depended upon the judgment of the individual inspector as to whether the proper equipment had been installed and whether it was being operated properly. In addition, opacity limitations are more flexible than the equipment standard in that the owner or operator is free to choose control options as long as the option chosen will result in compliance with the opacity limitation. This flexibility allows owners and operators to take advantage of innovations and advances in control technology, which the equipment standard did not always allow.

The specific opacity limits proposed for specific operations are based on present capabilities of fugitive particulate emission control at well-designed and well-operated facilities. These specific opacity limits are discussed below.

Section 3.a. of the rule as revised establishes a five percent opacity limitation for a truck unloading station, railcar unloading station, railcar loading station, or handling operation. The establishment of a five percent opacity limitation for these operations is reasonable because well-designed and well-operated facilites are presently meeting this requirement and need only to operate and maintain existing control systems. The state of the art for controlling particulate emissions from these facilities is commonly known and accepted as part of the cost of operating the facility. Part of the economic burden for new facilities is accepted by the operators as necessary for keeping the facilities clean of dust to prevent fires, explosions, to lower insurance rates, and to meet the health and safety requirements of the Occupational Safety and Health Administration. (<u>See</u> Exhibits 10 and 11.)

Section 3.b. of the rule as revised establishes a ten percent opacity limitation for a truck loading station. It is reasonable to have a less stringent opacity limitation for truck loading station than for a truck unloading station because fugitive particulate emission control is more difficult at these operations. There are a wide variety of loading devices currently in use, none of which are successful in completely eliminating fugitive emissions because of the fact that trucks have fully open tops that are difficult to hood. The best method for loading trucks is within an enclosed structure using a dust suppressor. However, in many cases buiding an enclosure cannot be economically justified because of the small number of trucks loaded. Therefore it is reasonable to allow trucks to be unloaded outside so long as they meet the ten percent opacity limitation.

Section 3.c. of the rule as revised establishes a twenty percent opacity limitation for ship or barge loading or unloading stations, except that during trimming or topping-off, when normal loading procedures cannot be used, no opacity standard applies. It is reasonable to apply a twenty percent opacity limitation to ship or barge loading or unloading except during trimming or topping-off because this standard can be easily met with state of the art control equipment. The ability to meet the standards and the reasonableness of the exceptions to the standard are discussed below.

Existing ship and barge loading or unloading stations are currently required by the existing APC 29 to be controlled by the application of induced draft to all sources of particulate emissions. Agency enforcement experience has shown that where induced draft has been applied, the facility is capable of meeting a twenty percent opacity limitation except during trimming and topping-off. Therefore the rule as revised is reasonable because it does not establish requirements that are more stringent than those of the existing rule.

The existing facilities affected by this rule include seventeen barge loading facilities and five commodity facilities engaged in the bulk loading of lakers and ocean going ships.

Of the seventeen barge loading facilities, fifteen have installed dust suppressors and induced draft. The other two barge loading facilities are capable of operating in a manner that meets a twenty percent opacity limitation without installing dust suppression equipment. Therefore existing barge loading facilities will not be adversely impacted by this rule.

Of the five shiploading facilities, three have the capability of loading ships in compliance with the twenty percent opacity limitations because they have installed well designed dust suppressors and extendable spout systems. One of the remaining facilities is able to meet the twenty percent opacity restriction by loading only sunflower seeds. The other facility is restricted from loading ships by the existing APC 29 until a dust suppression system is installed. For this uncontrolled facility, the rule as revised will allow the operator to select any control option which will result in compliance with the opacity standard. Therefore the rule as revised is reasonable as to the ship loading facilities which exist in Minnesota.

The rule as revised states that the twenty percent opacity standard is not applicable to ship or barge loading or unloading operations during trimming or topping-off, when normal loading procedures cannot be used. 5/ The phrase "when normal loading procedures cannot be used" limits the exemption so that if a facility is designed so that it is possible to meet the opacity limits during trimming and topping-off, the emissions must be

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5/ In drafting the amended rule, the Agency considered addressing the special problems of trimming and topping-off using options other than a total exemption from opacity standards. One possibility was the approach taken in Minn. Rule APC 11 B., which establishes a twenty percent opacity limitation for certain facilities but which allows the following excursion: "a maximum of 40% opacity shall be permissible for four minutes in any 60 minute period." This type of excursion allowance does not fit the situation for trimming or topping-off because, although trimming or topping-off operations constitute a very small portion of a total loading period, either operation might in a given instance exceed four minutes in length and might exceed a 40 percent opacity limitation. In fact, for these operations, establishing a time period for an excursion might be too restrictive in some cases and not restrictive enough in others, since the time necessary to complete these operations varies on a case-by-case basis. Adjusting the opacity limit upward for an allowable excursion is similarly unsatisfactory for the same reason. Allowing, for example, a 60 percent opacity standard for all trimming and topping-off operations would not encourage owners and operators to do better than 60 percent when possible, as does the language of the proposed rule (as discussed below). For these reasons, the Agency chose not to use the excursion approach of Minn. Rule APC 11 B.

controlled to meet the opacity limitation. The term "normal loading procedures" is subject to reasonable interpretation on a case-by-case basis both now and in the future. For some facilities, there are at the present time portions of trimming and topping-off operations which neither the commodity handling industry nor the Agency knows how to control in an economically feasible manner. However, over the past several years advances have been made in the control of fugitive emissions, and as these advances have become economically and technically feasible, they have become incorporated into "normal loading procedures." The Agency expects that in the future there will be advances in emission control that likewise will become incorporated into normal loading procedures. In this manner the rule will allow for improvements to be added to commodity facilities. However, as discussed below, there are situations where applying the opacity limitation would not be economically reasonable.

"Trimming" is defined by Section A.14. of the revised rule as "the part of the ship loading that requires the use of spoons, slingers, and other equipment attached to the loading spout to ensure that a ship is loaded to capacity." Trimming is normally unnecessary when loading barges. (Exhibit 12.) Trimming is required on those ocean going ships that are difficult or impossible to load completely because the design of the ship is such that the holds and the wing tanks cannot be loaded using the normal loading spout system. Trimming is also required when loading a type of ship known as a "tween decker," an older style of ship sometimes loaded in the Duluth Harbor. This type of ship has more than one deck, and in order to distribute grain to the corners under the decks it is necessary to use a device which will fling the grain or other commodity into those corners. Controlling particulate matter emissions during the trimming operation is extremely difficult and thus extremely expensive. The types of controls that could be used would not be economically justifiable because of the fact that trimming operations are so rarely necessary. The fact that these operations are relatively rare makes the exemption for trimming operations reasonable because it will have a minimal impact on air quality. Therefore it is reasonable to exempt from the opacity limitation those portions of trimming operations where normal loading procedures cannot be used.

"Topping-off" is defined in Section A.13. of the revised rule as "the placing of grain in the final three feet of void in a barge, nine feet in a ship, between the fore and aft center line of the hatch and the outboard side of the vessel." The definition states how depth is determined: "by vertical measurement along the outboard side of the vessel from the top of the hatch opening." Topping-off is done during the final phases of loading a barge or ship. There are two reasons why particulate emission control is difficult or impossible during topping-off:

1. As the grain or other commodity being loaded falls from the end of the loading spout, the loading spout is maneuvered about the inside of the vessel so that the grain or other commodity will be well-distributed. The equipment used on a loading spout to control particulate emissions is often a "dead box," a removable piece of equipment which controls emissions but also lessens the speed of the free-fall of the grain or commodity. At the end of the loading process, when the vessel becomes nearly full,the room to maneuver the loading spout becomes less and less. In order to fill the outboard side of the barge or ship, it may be necessary to remove or bypass the control equipment in order to physically reach that portion of the vessel.

2. During topping-off, the owner or operator may face the following situations which may result in an increase in the distance that the commodity must fall: a) as a ship becomes almost full, it may become necessary to elevate the end of the loading spout in order to reach the outboard side of the ship, 6/ and b) as a barge is loaded it may become necessary to reach the outboard

6/ Exhibit 13 shows an example of the different angles that are used to load a ship when it is empty and when it is loaded.

side of the barge to level out the load. These situations result in an increase in the distance between the end of the spout and the outboard side of the vessel. This increased distance increases the potential for fugitive emissions because the wind has a greater opportunity to blow the commodity away.

Topping-off cannot be avoided for the safety of the barge or ship. Uneven loading of a ship or barge can result in a listing of the vessel, which is not acceptable for proper nagivation.

That portion of topping-off where normal loading procedures cannot be used takes place during a very limited period of time. Agency calculations indicate that topping-off barges involves only about two percent of the commodities loaded (Exhibit 14) and that topping-off ships involves five percent or less of the commodities loaded (Exhibits 15 and 16). The annual increase in particulate emissions is calculated to be less than one ton from uncontrolled topping-off of barges and less than three tons from uncontrolled topping-off of ships. It is conceivable that if expense were no object these emissions could be controlled; however, in light of the short period of time the operations take place, the great expense to control them is not justifiable in light of the small air quality benefit to be achieved. Therefore it is reasonable to exempt from the twenty percent opacity limitation those portions of topping-off operations where normal loading procedures cannot be used.

For the reasons stated above, the requirements of Section 3.c. of the revised rule relating to ship or barge loading or unloading are reasonable.

Section 3.d. of the revised rule establishes performance standards for control equipment installed at commodity facilities. The owner or operator must meet the limits set forth in Table 2 of Minn. Rule APC 5 and must meet an opacity limitation. However, the rule contains an exception providing that facilities constructed prior to January 1, 1984, with an annual commodity throughput of more than 180,000 tons and located in an unincorporated area or in a city with a population of less than 7,500, outside the Minneapolis St. Paul Air Quality Control Region is in compliance if the control equipment has a collection efficiency of not less than 85 percent by weight.

The requirement to meet the limits set forth in Table 2 of Minn. Rule APC 5 is already established for control equipment on existing grain handling facilities by existing APC 29(e), which provides:

> Equivalent Performance Standard. The owner or operator of a grain handling facility who is required to convey particulate emissions through control equipment shall be deemed to be in compliance with the requirements of this regulation if the owner or operator of the facility does not cause or allow the emission of particulate matter from any control equipment to exceed the limits set forth in Tables 1 & 2 in APC 5.

It is reasonable to extend this requirement to the commodity facilities covered by the revised rule because the handling of the commodities covered by the rule involves particulate matter problems which are the same or similar to those created by the handling of grain.

The amendments to the rule also establish an opacity standards for the emissions from the control equipment. The addition of an opacity standard applicable to control equipment will not result in a need to upgrade or install additional control equipment because it is the Agency's intent that the opacity limit be set at a level which can be met by the types of control equipment currently used on commodity facilities.

The proposed revised rule as published in the State Register contains a five percent opacity limitation for control equipment. However, the Agency has determined that this limitation is too restrictive for the types of control equipment required under Table 2 of Minn. Rule APC 5. The largest concentration of particulate matter allowed by Table 2 is 0.10 grains per standard cubic foot. If the rule is to be in accord with Agency intent, control equipment to which the 0.10 emission limit is applicable must be able to meet the opacity limitation established for that control equipment. The Agency examined a study performed by EPA and reported in "Optical Properties and Visual Effects of Smoke Stack Plumes." A graph contained in that study (Exhibit 17) shows that the optical transmittance of plumes containing a mass particulate matter concentration of 0.10 grains per cubic foot from a stack having a ten foot diameter is 70 percent (please refer to the dotted line for the 6.4 micron size particles). This translates to 30 percent opacity. The opacity of a plume is related to the distance through the plume. A commodity facility control equipment stack is normally about three feet in diameter. The Agency, using EPA's chart, has calculated that for a three foot diameter stack, the opacity for control equipment meeting a 0.10 grains per cubic foot emission standard would be expected to be about nine percent opacity. Therefore the five percent opacity limitation is too stringent and the Agency is proposing that a change be made in the rule as proposed so that a ten percent opacity limitation is applicable to the control equipment at these facilities.

The establishment of an opacity limitation for equipment to which a numerical emission limit also applies is a common practice of regulatory agencies who deal with air pollution abatement. (See, e.g., 6 MCAR §4.0004.) Where the emissions from the equipment meet the opacity limitation, it extremely likely that the emission limitation is also being met. This allows the Agency and the regulated party to monitor compliance without the necessity of running time-consuming and costly stack tests. (Exhibit 18.) Therefore it is reasonable to establish an opacity limitation for control equipment installed on commodity facilities.

The exception in the rule allows existing facilities with annual throughput of more than 180,000 tons and located in unincorporated areas or small towns outside the seven county Metropolitan area to be in compliance if they were previously in compliance with those portions of existing APC 29(c) and (d) that required control equipment to have a collection efficiency of not less than 85 percent by weight. This exception affects three facilities in Minnesota presently known to have an annual commodity throughput exceeding 180,000 tons and another ten to fifteen facilities with the design capacity and potential to reach or exceed the 180,000 tons annual throughput level. (See Exhibit 9.) It is reasonable to allow these facilities to remain in compliance without adding additional control equipment because a requirement to retrofit these facilities with more efficient control equipement would impose a severe economic hardship on these facilities which would place them at an economic disadvantage.

Section B.4. of the rule as revised provides that if an owner or operator of a commodity facility is not required to control emissions under Sections B.2. or B.3. of the rule, he or she is not required to install capture systems and control equipment. However, that owner or operator is nevertheless required to unload, handle, clean, dry, and load commodities to minimize fugitive emissions to a level consistent with RACT. However, if the owner or operator does install a capture system, the particulate matter must be conveyed through control equipment that has a collection efficiency of not less than 85 percent by weight.

The facilities covered by Section B.4. of the rule are smaller facilities located in more sparsely populated areas. It is reasonable not to require the installation of control equipment on these facilities because smaller facilites cannot economically support the installation of control equipment. However, it is reasonable to require the implementation of economically and technically feasible emission control because these facilities do have an impact on ambient air quality.

The ability of smaller facilities to support the installation of control equipment was studied by EPA. The results of that study are reported in Chapter 5 of a document entitled "Emission Control in the Grain and Feed Industry, Volume I." (Exhibit 19.) This study includes a review of the financial statement of country elevators, inland terminal elevators, and export elevators to determine the financial impact of air pollution control equipment costs upon the elevators. The study determined that control equipment costs decrease the net income of small elevators by sixty percent when baghouse filters are required and fifty percent when cyclones are required. (Exhibit 19 at p. 353.) The results of this study show that small facilities cannot economically support the installation of either type of control equipment.

Complaints from residents near these facilities received by the Agency demonstrate the fact that some country elevators have the potential to create a nuisance situation. The complaints result from concern that the facility operator is indiscriminately allowing the discharge of emissions into the air during unloading, loading, storage, drying, cleaning, and transporting the commodities. It has been learned that in most cases these problems can be resolved to the satisfaction of the residents simply and econmically by modifying the method of operating handling equipment, by patching ductwork, enclosing unprotected dusty areas, or cleaning up the dusty areas that generate the emissions.

It is reasonable to require that particulate emissions from these facilities be controlled to a degree consistent with RACT because, by definition, RACT requires only that which is technologically and economically reasonable. However, it should be noted that the provisions of 6 MCAR §4.0001 prohibit any facility from being operated in a manner that will result in a violation of the ambient air quality standards, and the provisions of Section C. of the rule as revised (section (g) of the existing APC 29) prohibit the operation of the facility in a manner that will cause a public nuisance.

Section (c)(3)(bb) of the existing APC 29 contains the same requirements as those in the last sentence of Section B.4. of the revised rule. For these facilities, the revised rule does not change the requirement that an owner or operator who has installed a capture system must convey collected particulate matter through control equipment with a collection efficiency of not less than 85 percent by weight.

Section B.5. Grain Dryers

Section B.5. of the rule as revised provides that a grain dryer must meet the design specifications set forth in Sections 5.a. and 5.b. The design specifications are identical to those established in the existing rule APC 29(f)(2) and (3). However, the Agency is proposing to eliminate the language of Section (f)(1) of the existing rule, which provides that the owner or operator of a grain dryer shall be deemed in compliance with the requirements of APC 29 if:

> (1) The grain dryer is located in a protected area away from residences and places frequented by the public and operation of the grain dryer does not create a public nuisance. If the Director determines that the operation of the grain dryer is a public nuisance, the owner or operator shall enclose the grain dryer in such a manner that the nuisance is eliminated.

It is reasonable to eliminate this language because it is unnecessary. Any nuisance problem associated with a grain dryer can be dealt with pursuant to the provisions of Section C. of the revised rule (Section (g) of the existing rule).

Section C. Nuisance

Section C. of the rule as revised prohibits the owner or operator of any commodity facility from operating or maintaining the facility in such a manner as to create a public nuisance. If the Director of the Agency determines that a facility creates a public nuisance, the director may require the owner or operator to take measures necessary to eliminate the nuisance.

The revised rule is identical to Section (g) of the existing rule, with the exception that the term "grain handling facility" has been changed to "dry bulk agricultural commodity facility." It is reasonable to expand the coverage of the original rule to the additional commodity facilities covered by the revised rule because the additional commodity facilities create the same types of particulate emission problems that grain handling facilities create.

VI. CONSIDERATION OF SMALL BUSINESS

Minn. Laws 1983, ch. 188 (to be codified as Minn. Stat. §14.115) requires the Agency, when proposing amendments to an existing rule which may affect small businesses, to consider the following methods for reducing the impact of the rule 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 requirments 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.

In drafting the proposed amendments to APC 29 the Agency did give consideration to small businesses. The rule as revised provides exemptions from any requirement to install control equipment for many small facilities (see Exhibit 6 MCAR §4.00291-1, consistent with items (a) and (e) above. The Agency has replaced the induced draft equipment standard with performance standards (opacity limitations), which provides more flexibility than the existing rule and which is consistent with items (c) and (d) above. Since there are no reporting rules or specific schedules of compliance in the amended rules, item (b) does not apply to these rules.

The Agency actively sought the input of regulated persons, including small businesses, during the drafting of the proposed rule amendments. The Agency invited commodity facility owners and operators and representatives of all commodity facility associations to a comment on a preliminary draft of the rule amendments at a meeting which was held on December 15, 1982, at the Agency offices. Many comments were received at the meeting and after the meeting, and the rules were redrafted to take those comments into account. Another meeting was held on March 15, 1983. The Agency believes that the rule as finally proposed addresses the concerns of the regulated parties.

VII. CONCLUSION

Based on the foregoing, the proposed amendments to Minn. Rule APC 29, Standards of Performance for Grain Handling Facilities, to be Recodified and Retitled §4.00291, Standards of Performance for Dry Bulk Agricultural Commodity Facilities, are needed and reasonable.

MINNESOTA POLLUTION
CONTROL AGENCY

for Jay M. Heffern

Sandra S. Gardebring
Executive Director

September 16, 1983

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendment of Minn. Rule APC 29, Standards of Performance for Grain Handling Facilities, to be Recodified and Retitled 6 MCAR §4.00291, Standards of Performance for Dry Bulk Agricultural Commodity Facilities

EXHIBIT LIST

The following exhibits are referred to in the Statement of Need and Reasonableness and are available for inspection at the Agency's offices at 1935 West County Road B2, Roseville, Minnesota.

No.	Title
1	Existing Minn. Rule APC 29, Standards of Performance for Grain Handling Facilities.
2	Sections 109-116 of the Clean Air Act, as amended in 1977.
3	U. S. Environmental Protection Agency (EPA) Notice of Proposed Rulemaking (46 Fed. Reg. 57061, November 20, 1981).
4	Letter of J. Michael Valentine, Director, Division of Air Quality, Minnesota Pollution Control Agency, (MPCA) to Gary Gulezian, Chief of Regulatory Analysis Section, EPA, December 18, 1981.
5	EPA Notice of Final Rulemaking (47 Fed. Reg. 19556, May 6, 1982).
6	New Source Performance Standards for Grain Elevators, 40 C.F.R. §§60.300 - 60.304, published at 43 Fed. Reg. 34340 (August 3, 1978).
7	Standards Support and Environmental Impact Statement, Volume 2, Promulgated Standards of Performance for Grain Elevator Industry, EPA, April, 1978.
8	Letter of Valdus V. Adamkus, EPA Regional Administrator, to Louis J. Breimhurst, Executive Director, MPCA, September 1, 1982.

No.	Title
9	Number and Location of Grain Elevators with 2500 Population or More; Commodity Facilities with Potential for 180,000 Tons Annual Throughput and Located Outside the Minneapolis-St. Paul Air Quality Control Region in Cities Less than 7,500 Population.
10	Memorandum of George Vasilakes, Division of Air Quality, MPCA, to Willis Mattison, MPCA, "Country Elevator Fire Insurance Inspection Criteria," February 28, 1983.
11	Memoradum of George Vasilakes, Division of Air Quality, MPCA, to Willis Mattison and Larry Landherr, MPCA, "Country Elevator OSHA Enforcement Criteria."
12	Memorandum of George Vasilakes, Division of Air Quality, MPCA, to file, "Telephone Communication on Barge Loading," January 10, 1983.
13	Diagram supplied by Continental Grain, showing spout angles during loading of the ship "Federal Fraser," March, 1983.
14	Diagram showing the cross section of a barge with calculation for estimating the percentage of the load at the final three feet of void at the far side of the hatch.
15	Diagram showing the cross section of a ship with calculations estimating the percentage of the load at the final nine feet of void at the far side of the hatch.
16	Diagram showing the cross section of an ocean-going ship (salty) with calculations estimating the percentage of the load at the final nine feet of void at the far side of the hatch.
17	Figure 21, page 32, Optical Properties and Visual Effects of Smoke Stack Plumes, EPA, 1967.
18	Crocker, B.B., "Monitoring Particulate Emissions," Chemical Engineering Progress, March, 1975.
19	Emission Control in the Grain and Feed Industry, Volume I, Chapter 5, "Economic Impact of Dust Control," EPA, December, 1973.