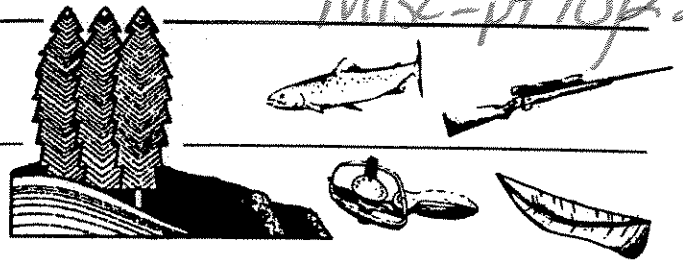


Assembly Committee on

Natural Resources

State Representative

DuWayne Johnsrud, Chair



MISC-pt 10/22

Fugitive Dust Rules and their Application

December 15 testimony of DuWayne Johnsrud before the
Assembly Environment Committee

Dear Committee Members:

Thank you Chairman Duff for obliging me on this busy hearing day and agreeing to devote time to the issue of fugitive dust. My interest in this issue stems from problems that at least three grain elevators in my area had during this fall's harvest, as grain prices were hitting all time lows.

I am afraid that the way in which grain elevators are being regulated is not necessary in order to meet requirements of the clean air act. I can see this when I look across the river to Iowa and see that they are not held to the same standard.

Specifically, NR 415.04 says that:

No person may cause, allow or permit ANY materials to be handled, transported or stored without taking precautions to prevent particulate matter (DUST) from becoming airborne.

This applies to **ALL** sources which emit particulate matter and their owners and operators. NR 415.04 even singles out farming in (1)(e) by requiring:

Conduct of agricultural practices such as tilling of land or application of fertilizers in such manner as not to create air pollution.

Roads are singled out in (f) when precautions are established to require:

The paving or maintenance of roadway areas so as not to create air pollution.

What about the gravel road I live on?

The severity of a fugitive dust emission is described by its opacity. Still, the location at which the opacity of the emission needs to be measured does not appear to be mentioned. Is it measured right where the grain is being dumped, or at the property line. Is it measured at the home of the person who complains? Would the emission reach the enforcement level if it were measured someplace other than directly at the source of the emission? Probably not.

If these regulations were applied consistently, there would be trouble for municipalities that maintain gravel roads, farmers tilling fields or nearly anyone who raises a little Cain, ehr, dust. I'm afraid I'll need to warn the Amish folks in my district about beating their quilts!

At present it seems as though, 415 is being applied selectively to grain elevators.

-more-

These are incredibly broad rules that give the DNR great authority. That authority is so general that the use of common sense and local knowledge is absolutely necessary to applying the rules fairly. Without some common sense, the legislature would need to step in and create exemptions for certain situations. I think exemptions are a possibility since, other than general authority, *there doesn't appear to be enabling legislation specific to grain or roads.*

PDC Hospital's ethylene oxide sterilizer is another example of Wisconsin going farther than may be needed. I understand that only NY and WI require permits for units that emit less than 25 pounds of waste. PDC's emits 7-19 pounds. Only in Wisconsin does it cost \$3,300 for the construction permit. I'm not sure why.

Back to grain dust.

I don't necessarily want to have to step in with language that narrows the scope of the Clean Air Act. We shouldn't have to . . . *unless this is the new template for enforcement.* I don't want the legislature to create roadblocks in application of these rules in serious situations involving human health and safety or other reasonable applications.

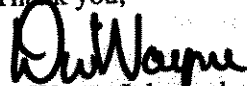
Still, when activities that are essential to the way rural economies function are threatened, there had better be some very good reasons for the upset.

Anonymous complaints don't cut it. Is the complaint from an urban transplant who can't stand a little dust on their car for a couple days in October? Did the person who complained lose a bid to purchase the land on which the elevator is located? Maybe there really is a health concern. We don't know. Anonymous complaints don't cut it.

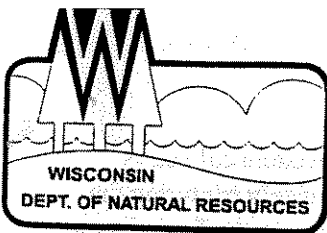
There is a perfectly good formal complaint process available to citizens in s. 299.91. Use of it could keep petty, tit-for-tat complaints from turning into serious legislative issues. Complaints about DNR employees need to be in writing, at least according to DNR manual code.

I could go on and on, but we have someone else here who is living this situation and who may be able to provide a little better insight on what is happening in the real world.

Thank you,



DuWayne Johnson
State Representative
96th Assembly District



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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November 24, 1998

The Honorable DuWayne Johnsrud
Member of Assembly
Room 323 North
State Capital

SUBJECT: Air Management Interaction with Feed Mills

Dear Representative Johnsrud:

I appreciated talking to you this morning about your concerns regarding the Department's interaction with feed mills and our follow up on complaints. As I mentioned on the phone, I will discuss your concerns about the manner in which DNR employees (and more specifically SCR and WCR staff) interact with the farming community as a whole and with owners of grain handling facilities in particular. I believe we must be courteous and professional in all of our interactions with people we regulate. I will do what I can within the agency to ensure this happens. In addition, I wanted to take this opportunity to provide an overview of our responsibilities under the Air Pollution Control Rules.

During the past two years we have worked with Wisconsin Agri-Service Association, and Wisconsin Federation of Cooperatives to develop exemption levels such that small and medium sized feed mills and grain elevators do not need to get air permits. This saves them from registering with the Department and paying fees. Although exempt from permitting, these facilities must still meet applicable environmental requirements.

In general, small grain handling facilities are not targeted for inspection. However if a citizen complaint is received, this will usually generate a phone contact or onsite investigation to determine the source of the complaint and severity of the problem. The Department understands that facilities such as feed mills will have some amount of dust associated with their operations. Rules establish limits for the emission of dust from grain processing and handling, whether the emissions are vented from stacks or emitted as fugitives. We often find that problems are caused by poor zoning, where residents and feed mills are built too close together, without a buffer zone between them. However even with poor zoning, the Department must work with sources to protect the air quality for nearby homes and other commercial establishments.

Many of the complaints we receive are related to the use of corn dryers, which tend to release dust and chaff. Also, the unloading of dusty grains in unsheltered dump areas, and the inadequate capture of dust from milling operations can release dust. This dust and chaff can settle on nearby cars, on windows, or hanging laundry causing nuisance conditions. It can also make air quality unhealthy for nearby residents.

When our staff investigations lead to a conclusion that operations at a feed mill are responsible for dust that is causing a nuisance to nearby residents, they try to work with the mill management to solve the problem without resorting to formal enforcement as much as possible. There are several options for controlling



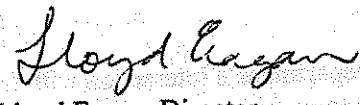
Quality Natural Resources Management
Through Excellent Customer Service



emissions that can be implemented. Most milling operations are usually controlled by cyclone collectors which are effective if the milled grain is not too fine or dusty. Where these are not adequately capturing the dust, fabricfilters will normally solve the problem, and the escaping dust can be recycled into the feed. Dump pit areas can usually be controlled by the partial enclosure of the area, and tarps can be used to provide temporary enclosure. The chaff released by corn dryers is mainly a house keeping problem, which requires periodic cleanup before the material leaves the property. The closer the proximity of feed mills to neighbors, the higher the level of house keeping that will be needed to prevent nuisance conditions.

Generally, in dealing with complaints we find it advantageous for the mill management to develop communication with neighbors. We understand that even well controlled feed mills may have some small amount of fugitive emissions, and we will try to balance the job of working with mill management while protecting citizens from air pollution and nuisances. If you have any questions regarding this matter, please contact me at (608) 266-0603.

Sincerely,



Lloyd Egan, Director
Bureau of Air Management

cc: Jay Hocmuth - AD/5
Regional A&W Leaders

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Chapter NR 415

CONTROL OF PARTICULATE EMISSIONS

NR 415.01	Applicability; purpose.	NR 415.075	Particulate emission limitations for ledge rock quarries and industrial sand mines.
NR 415.02	Definitions.	NR 415.076	Particulate emission limitations for crushed stone and sand and gravel plants.
NR 415.03	General limitations.	NR 415.08	RACT requirements for coking operations.
NR 415.04	Fugitive dust.	NR 415.09	Compliance schedule for sources of condensable particulate matter.
NR 415.05	Particulate emission limits for processes.		
NR 415.06	Particulate emission limits for fuel burning installations.		
NR 415.07	Particulate emission limits for incinerators.		

NR 415.01 Applicability; purpose. (1) **APPLICABILITY.** This chapter applies to all air contaminant sources which emit particulate matter and to their owners and operators.

(2) **PURPOSE.** This chapter is adopted under ss. 285.11, 285.13 and 285.17, Stats., to categorize particulate matter air contaminant sources and to establish emission limitations for these sources in order to protect air quality.

Note: Particulate emission limitations are also established in chs. NR 431 and 440 and ss. NR 485.05 and 485.055.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (1), Register, May, 1992, No. 437, eff. 6-1-92; correction in (2) made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

NR 415.02 Definitions. In addition to the definitions in this section, the definitions in ch. NR 400 apply to the terms used in this chapter.

(2) "Fugitive dust" means solid airborne particles emitted from any source other than a flue or stack.

(3) "Heatsheet web offset press" means a type of lithographic press which requires a heated dryer to solidify the printing inks, uses a blanket cylinder to transfer ink from the plate cylinder to the surface to be printed, and prints on a surface which is fed to the press by a continuous roll web.

(5) "Process weight" means the total weight of all materials that can be introduced into any direct source operation based on the design capacity of the source or a capacity level approved by the department, except liquid fuels, gaseous fuels and air.

(6) "Public trafficable area" means any trafficable area which is owned, operated, maintained or controlled by a municipality, interstate agency, state agency or federal agency.

(8) "Roadway areas" means any surface on which motor vehicles travel including, but not limited to, highways, roads, streets, parking areas and driveways.

(9) "Silt content" means that portion by weight of a particulate material which will pass through a no. 200 (75 μ m) wire sieve as determined by the dry method in ASTM C136-93, incorporated by reference in s. NR 484.10, or other method approved by the department.

(10) "Trafficable area" means any area, including but not limited to a parking lot or storage area, which is external to a building or structure, is reasonably capable of being traveled by a motor vehicle, and is accessible to a motor vehicle.

History: Renum. from NR 154.01, cr. (intro.) and (7), Register, September, 1986, No. 369, eff. 10-1-86; renum. (3) to (9) to be (4) to (10), cr. (3), Register, April, 1989, No. 400, eff. 5-1-89; am. (intro.) and (9), r. (1), renum. (4) and (7) to be NR 400.02 (60m) and (80m), Register, May, 1992, No. 437, eff. 6-1-92; am. (9), Register, April, 1995, No. 472, eff. 5-1-95; am. (5), Register, December, 1995, No. 480, eff. 1-1-96; am. (9), Register, December, 1996, No. 492, eff. 1-1-97.

NR 415.03 General limitations. No person may cause, allow or permit particulate matter to be emitted into the ambient air which substantially contributes to exceeding of an air standard, or creates air pollution.

History: Renum. from NR 154.11 (1), Register, September, 1986, No. 369, eff. 10-1-86; am. Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.04 Fugitive dust. No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions.

(1) Such precautions shall include, but not be limited to:

(a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, or construction operations.

(b) Application of asphalt, water, suitable chemicals or plastic covering on dirt roads, material stockpiles and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor or water pollution problem.

(c) Installation and use of hoods, fans, and air cleaning devices to enclose and vent the areas where dusty materials are handled.

(d) Covering or securing of materials likely to become airborne while being moved on public roads, railroads or navigable waters.

(e) Conduct of agricultural practices such as tilling of land or application of fertilizers in such manner as not to create air pollution.

(f) The paving or maintenance of roadway areas so as not to create air pollution.

(2) In addition to meeting the requirements of sub. (1), any direct or portable source located in a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter; and any direct or portable source located near such areas whose aggregate fugitive dust emissions may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration), as determined by the analysis under ch. NR 401, shall meet the following RACT requirements:

(a) Storage piles having a material transfer greater than 100 tons in any year are subject to the following requirements:

1. Storage piles of material having a silt content of 5% to 20% shall be treated with water, surfactants, stabilizers or chemicals; draped; or enclosed on a minimum of 3 sides. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

2. Storage piles of materials having a silt content of 20% or more shall be completely enclosed or draped except any part being worked, loaded or unloaded. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

(b) Materials handling operations are subject to the following requirements:

1. Materials handling operations, including but not limited to crushing, grinding, mixing, screening, compacting, conveying, handling of waste material with more than 5% silt, and loading and unloading of railcar, truck, ship or barge shall have fugitive

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emissions controlled to 20% opacity when wind speeds are less than 25 miles per hour except for 3 minutes in any hour when fugitive emissions may equal 50% opacity.

2. Any device used to control fugitive emissions from materials handling operations which has a discharge to the ambient air shall be controlled equal to or less than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

(c) Process fugitive emissions are subject to the following control requirements:

1. Any device used to control fugitive particulate emissions from processes which has a discharge to the ambient air shall be controlled to an exhaust gas concentration equal to or less than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

2. Emissions from any building or structure egress other than a stack shall be controlled such that visible emissions do not exceed 20% opacity except for 3 minutes in any hour when fugitive emissions may equal 50% opacity.

(3) In addition to meeting the requirements of sub. (1), private industrial or commercial trafficable areas, roads and driveways which are located in or within one mile of a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter, are 20,000 square feet or more in total area, are on contiguous property under common ownership or control, and are subject on 3 separate days during any 14 consecutive day period to motor vehicle traffic at any point within the roads, driveways or trafficable areas at a rate equal to or greater than 10 motor vehicles per 60 minute period, shall meet the following RACT emission limitations:

(a) Be paved with asphalt, concrete or other material approved by the department, or use other methods of dust control which the department approves as representing RACT for the particular road, driveway or trafficable area. Such other methods of dust control which may be approved by the department include but are not limited to periodic application of water or suitable chemicals. In reviewing and acting upon plans required by sub. (5) for compliance with this subsection, the department shall consider the effects of the use of paving or other methods of dust control upon the rate and volume of surface water runoff and water quality.

(b) If paved, be kept reasonably free of material likely to become airborne, through a program of periodic cleaning.

(4) In addition to meeting the requirements of sub. (1), any roadway or public trafficable area which is located in or within one mile of a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter and which is subject on 3 separate days during any 14 consecutive day period to motor vehicle traffic at any point within the roadway or public trafficable area at a rate equal to or greater than 10 motor vehicles per 60 minute period shall meet the RACT emission limitations of this subsection. For purposes of this subsection, ownership or control of different portions of a roadway or public trafficable area by different municipalities, interstate agencies, state agencies or federal agencies may not be considered in determining the contiguous area of the roadway or public trafficable area.

(a) If paved, roadways and public trafficable areas covered by this subsection shall be kept, through a program of periodic cleaning, reasonably free of material likely to become airborne. This paragraph does not apply to a public trafficable area of less than 20,000 contiguous square feet in area unless the public trafficable area is also a roadway.

(b) If unpaved, roadways and public trafficable areas covered by this subsection shall be paved with asphalt, concrete or other material approved by the department, or use other methods of dust control which the department approves as representing RACT for the particular roadway or public trafficable area. Such other methods of dust control which may be approved by the department include but are not limited to periodic application of water or suitable chemicals. In reviewing and acting upon plans required by

sub. (5) for compliance with this subsection, the department shall consider the effects of the use of paving or other methods of dust control upon the rate and volume of surface water runoff and water quality. This paragraph does not apply to roadways or to public trafficable areas which have less than 20,000 contiguous square feet of unpaved surface area.

(5) When a direct or portable source is subject to the emission limitations of sub. (2), (3) or (4) the owner or operator may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025 (1):

(a) Submit plans for compliance within 8 months.

(b) Award any necessary contracts within 15 months.

(c) Commence construction, installation or modification of emission control techniques required under subs. (2) (a) and (b) 1., (3) and (4) within 18 months.

(d) Commence construction, installation or modification of emission control techniques required under sub. (2) (b) 2. and (c) within 24 months.

(e) Complete construction, installation or modification of emission control techniques required under subs. (2) (a) and (b) 1., (3) and (4), achieve compliance, and so certify to the department within 21 months.

(f) Complete construction, installation or modification of emission control techniques required under sub. (2) (b) 2. and (c) within 30 months and achieve final compliance and so certify to the department within 33 months.

History: Renum. from NR 154.11 (2) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (intro.), (1) (f) and (2) (c) 2., Register, May, 1992, No. 437, eff. 6-1-92; am. (1) (b), (2) (a) (intro.), (b) (intro.), and (c) (intro.), (3) (a) and (4) (b), Register, December, 1995, No. 480, eff. 1-1-96.

NR 415.05 Particulate emission limits for processes. No person may cause, allow or permit the emission of particulate matter to the ambient air from a direct or portable source involving a process in excess of the following limitations:

(1) All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this subsection.

(a) Cupolas melting more than 200 tons of metal in any year: 0.45 pounds of particulate matter per 1,000 pounds of gas.

(b) Electric arc or induction furnaces: 0.10 pounds of particulate matter per 1,000 pounds of gas.

(c) Open hearth furnaces: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(d) Basic oxygen furnaces: 0.10 pounds of particulate matter per 1,000 pounds of gas.

(e) Sintering plants: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(f) Air melting furnaces: 0.30 pounds of particulate matter per 1,000 pounds of gas.

(g) Heating or preheating furnaces: 0.30 pounds of particulate matter per 1,000 pounds of gas.

(h) Blast furnaces: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(i) Asphalt, concrete or aggregate mix plants: 0.30 pounds of particulate matter per 1,000 pounds of gas.

(j) Cement kilns: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(k) Lime kilns: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(L) Cement klinker coolers: 0.30 pounds of particulate matter per 1,000 pounds of gas.

(m) Grinding, drying, mixing, conveying, sizing or blending: 0.20 pounds of particulate matter per 1,000 pounds of gas.

(n) Grain processing or handling: 0.40 pounds of particulate matter per 1,000 pounds of gas.

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(o) Any other process not enumerated: 0.40 pounds of particulate matter per 1,000 pounds of gas.

(2) All direct and portable sources on which construction or modification is commenced after April 1, 1972 shall meet the emission limitations of this subsection. The allowable emissions of particulate matter are calculated by the use of the equation

$$E = 3.59 P^{0.62}$$

for process weight rates up to 60,000 pounds per hour and by use of the equation

$$E = 17.31 P^{0.16}$$

for process weight rates of 60,000 pounds per hour or more, where E is the allowable emissions in pounds per hour and P is the process weight rate in tons per hour. If the calculated emission rate is less restrictive than the applicable concentration specified under sub. (1) based on the maximum exhaust flow rate and normal exhaust gas temperature, the limitation under sub. (1) shall apply.

Note: Some examples of these calculations are given in the following table.

Process Weight Rate (lbs/hr)	Emission Rate (lbs/hr)
50	0.36
100	0.56
500	1.52
1,000	2.33
5,000	6.33
10,000	9.74
20,000	14.96
60,000	29.57
80,000	31.23
120,000	33.33
160,000	34.90
200,000	36.16
400,000	40.41
1,000,000	46.79

(3) In addition to meeting the requirements of subs. (1) and (2), any direct or portable source located in or near a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration) as determined by the analysis under s. NR 401.025 shall meet the following RACT emissions limitations:

(a) Sources on which construction or modification was commenced on or before April 1, 1972 may not emit more than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

(b) Sources on which construction or modification was commenced after April 1, 1972 may not emit more than the emissions limits of sub. (2) or 0.20 pounds of particulate matter per 1000 pounds of exhaust gas, whichever is more restrictive.

(4) Notwithstanding sub. (3), any cupola may emit up to, but not more than 0.25 pounds of particulate matter per 1000 pounds of exhaust gas.

(5) When a direct or portable source is subject to the emission limitations of sub. (3) or (4), the owner or operator may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025 (1):

(a) Submit plans for compliance within 6 months.

(b) Award any necessary contracts within 12 months.

(c) Commence construction, installation or modification of any emission control system within 24 months.

(d) Complete construction, installation or modification of any emission control system within 30 months.

(e) Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

History: Renum. from NR 154.11 (3) and am. Register, September, 1986, No. 369, eff. 10-1-86; correction in (2) (a) 1. made under s. 13.93 (2m) (b) 7., Stats., Register, April, 1989; am. (intro.), (1) (b) to (c), (2) (a) (intro.) and 1., (3) (b), (5) (intro.), r. (2) (a) 2. and 3., (b), Register, May, 1992, No. 437, eff. 6-1-92; am. (2), Register, December, 1995, No. 480, eff. 1-1-96.

NR 415.06 Particulate emission limits for fuel burning installations. No person may cause, allow or permit the emission of particulate matter to the ambient air from any indirect heat exchanger, power or heating plant, fuel-burning installation or pulp recovery furnace with maximum heat input more than one million Btu per hour in excess of one of the following limitations:

(1) All installations on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this subsection:

(a) All installations shall meet the emission limitation of 0.60 pounds of particulate matter from any stack per million Btu heat input.

(b) Installations located in subregion 1 of the Lake Michigan Intrastate AQCR shall meet the emission limitation of 0.30 pounds of particulate matter from any stack per million Btu heat input.

(c) Installations located in the Southeastern Wisconsin Intrastate AQCR shall meet the following requirements:

1. Installations of 250 million Btu per hour or less: maximum emission defined by the equation

$$E = 0.3 - 0.0006I$$

where I is heat input in millions of Btu per hour and E is maximum allowable particulate emissions from any stack in pounds per million Btu heat input.

2. Installations of more than 250 million Btu per hour: maximum emission from any stack of 0.15 pounds of particulate matter per million Btu heat input.

(2) All installations on which construction or modification is commenced after April 1, 1972 shall meet the emission limitations of this subsection:

(a) Installations of 250 million Btu per hour or less except as provided in par. (b): maximum emission from any stack of 0.15 pounds of particulate matter per million Btu heat input.

(b) Installations of 100 million Btu per hour or less which are not located in the Southeastern Wisconsin Intrastate AQCR and which burn only wood, or wood simultaneously with liquid or gaseous fossil fuel: maximum emission from any stack of 0.50 pounds of particulate matter per million Btu heat input except that installations located in subregion 1 of the Lake Michigan Intrastate AQCR shall meet the requirements of sub. (1) (b).

(c) Installations of more than 250 million Btu per hour: maximum emission from any stack of 0.10 pounds of particulate matter per million Btu heat input.

(3) In addition to meeting the requirements of sub. (1) or (2), all installations located in or near a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration) as determined by the analysis under s. NR 401.025 shall meet the following RACT emission limitations:

(a) Installations of 100 million Btu per hour or less: maximum emission from any stack of 0.24 pounds of particulate matter per million Btu heat input.

(b) Installations of more than 100 million Btu per hour on which construction or modification commenced on or before April 1, 1972: maximum emission from any stack of 0.15 pounds of particulate matter per million Btu heat input.

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(c) Installations of more than 100 million Btu per hour but of not more than 250 million Btu on which construction or modification commenced after April 1, 1972: maximum emission from any stack of 0.15 pounds of particulate matter per million Btu heat input.

(d) Installations of more than 250 million Btu per hour on which construction or modification commenced after April 1, 1972: maximum emission from any stack of 0.10 pounds of particulate matter per million Btu heat input.

(4) Notwithstanding sub. (3) (a) or (b), any fuel burning installation of 250 million Btu per hour or less on which construction or modification was commenced on or before April 1, 1972 may emit up to, but not more than, an emission rate defined by the equation

$$E = 0.3 - 0.0006I$$

where I is the heat input in millions of Btu per hour and E is the maximum allowable particulate emissions from any stack in pounds per million Btu heat input, if as of March 1, 1980 for installations which may cause an impact on primary or associated secondary nonattainment areas, or as of March 1, 1982 for installations which may cause an impact on any other secondary nonattainment area, the installation has an emission rate based on original design or equipment performance test conditions, whichever is more restrictive, which is less than the limit set by the above equation, and the emission control system of such installations has not been allowed to degrade more than 0.05 pound per million Btu heat input from original design or acceptance performance test conditions.

(5) When an installation is subject to the emission limitations of sub. (3) the owner or operator may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025 (1):

- (a) Submit plans for compliance within 6 months.
- (b) Award any necessary contracts within 12 months.
- (c) Commence construction, installation or modification of any emission control system within 24 months.
- (d) Complete construction, installation or modification of any emission control system within 30 months.
- (e) Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

History: Renum. from NR 154.11 (4) and am. Register, September, 1986, No. 369, eff. 10-1-86; correction in (2) (b) made under s. 13.93 (2m) (b) 7., Stats., Register, April, 1989; am. (intro.), (1) (a), (b), (c) 1. and 2., (2) (a) to (c), (3) (a) to (d) and (4), Register, May, 1992, No. 437, eff. 6-1-92; am. (1) (a), (b), (c) (intro.), 1., Register, February, 1995, No. 470, eff. 3-1-95.

NR 415.07 Particulate emission limits for incinerators. No person may cause, allow or permit particulate matter, concentrations corrected to 12% carbon dioxide, to be emitted to the ambient air from any incinerator in excess of one of the following limitations:

(1) All incinerators on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this subsection.

(a) Incinerators located throughout the state; emissions of:

1. Incinerators rated at over 500 pounds of waste per hour: 0.50 pounds of particulate per 1,000 pounds of exhaust gas.
2. Incinerators rated at 500 pounds of waste per hour or less: 0.60 pounds of particulate per 1,000 pounds of exhaust gas.

(b) Incinerators located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeastern Wisconsin Intrastate AQCR; in addition to meeting the emission limits of par. (a) these incinerators shall meet the following emission limits:

1. Incinerators of 5 cubic feet capacity or more: 0.30 pounds of particulate per 1,000 pounds of exhaust gas.
2. Prefabricated domestic incinerators below 5 cubic feet capacity may not exceed the performance emission requirements prescribed by the American National Standards Institute for

domestic incinerators, standard Z21.6, incorporated by reference in s. NR 484.11.

(2) All incinerators on which construction or modification is commenced after April 1, 1972 shall meet the emission limits of this subsection.

(a) Incinerators other than those specified in par. (b); emissions in excess of:

1. Incinerators rated at 4,000 pounds of waste per hour or more: 0.15 pounds of particulate per 1,000 pounds of exhaust gas.
2. Incinerators rated at over 500 pounds of waste per hour and less than 4,000 pounds of waste per hour: 0.20 pounds of particulate per 1,000 pounds of exhaust gas.
3. Incinerators rated at 500 pounds of waste per hour or less other than prefabricated domestic incinerators below 5 cubic feet capacity: 0.30 pounds of particulate matter per 1,000 pounds of exhaust gas.

4. Prefabricated domestic incinerators below 5 cubic feet capacity may not exceed the performance emission requirements prescribed by the American National Standards Institute for domestic incinerators, standard Z21.6, incorporated by reference in s. NR 484.11.

(b) Sewage treatment plant sludge and grit incinerators on which construction or modification is commenced after February 1, 1975; emissions may not exceed 1.30 pounds per ton of dry sludge or grit input (0.65 grams per kilogram of dry sludge or grit input).

History: Renum. from NR 154.11 (5) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (intro.), (1) (b) 2., (2) (a) 4. and (b), Register, May, 1992, No. 437, eff. 6-1-92; am. (1) (a) (intro.), (b) (intro.) and 2., (2) (a) 4., Register, December, 1995, No. 480, eff. 1-1-96.

NR 415.075 Particulate emission limitations for ledge rock quarries and industrial sand mines. (1) **APPLICABILITY.** (a) Except as provided in par. (b), the provisions of this section are applicable to the following operations and emission points in ledge rock quarries and industrial sand mines: blasting, drilling, roads, storage piles and use of haul trucks.

(b) Operations at any of the following ledge rock quarries and industrial sand mines are not subject to the provisions of subs. (2) to (4):

1. Ledge rock quarries with actual production of less than 25,000 tons per month on a rolling 12 month average.
2. Ledge rock quarries with actual operation of less than 365 days per 5 year period.
3. Industrial sand mines with actual production of less than 2,000 tons per month on a rolling 12 month average.

(c) When a ledge rock quarry or industrial sand mine is operated by more than one owner or operator, then actual production and actual operation shall be cumulative at the site. The applicable particulate emissions limitations of this section shall be applicable to all subsequent operators or owners at that site.

(2) **PARTICULATE EMISSION LIMITATIONS IN ALL AREAS OF THE STATE.** (a) No person may cause, allow or permit the use of any parking lot, road or other area by haul trucks or any drilling or blasting without taking precautions to prevent particulate matter from becoming airborne. These precautions shall be taken to the extent necessary so that any applicable requirements are met and shall include one or more of the following:

1. Application of asphalt, water or suitable chemicals on unpaved roads or other areas used by haul trucks which can create airborne dust, provided the application does not create a hydrocarbon, odor or water pollution problem.
2. Posting and maintenance of a 10 MPH speed limit on paved or unpaved roads or other areas used by haul trucks inside the facility's property line.
3. Covering, treatment or securing of materials likely to become airborne from haul trucks during transport, prior to any transportation off site from the quarry or mine.

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4. Use of wet drilling or other means of control approved by the department.

5. The use of blast hole stemming materials that have been approved by either the department or the department of industry, labor and human relations.

6. Any precautions proposed by the owner or operator and accepted by the department in a permit or fugitive dust control plan.

7. Use of no precautions where control measures are unnecessary due to site or meteorological conditions.

(b) In addition to meeting the requirements of par. (a), the owner or operator shall control fugitive emissions from a road or other area used by haul trucks and from drilling so that visible emissions do not exceed 20% opacity at the source.

(c) The owner or operator shall submit to the department the fugitive dust control plan described in sub. (6).

(3) PARTICULATE EMISSIONS LIMITATIONS FOR OPERATIONS IN NONATTAINMENT AREAS. In addition to meeting the limitations of sub. (2), the owner or operator of any ledge rock quarry or industrial sand mine located in an area designated as nonattainment for either TSP or PM₁₀ shall do all of the following:

(a) Prior to a haul truck's departure from plant property, the haul truck's wheels and tires shall be sprayed with water or otherwise cleaned at the exit point from plant property.

(b) Storage piles of material having a silt content of greater than 5% shall be treated with water, surfactants, stabilizers or chemicals; draped; or enclosed on a minimum of 3 sides. The height of enclosure shall ensure that excessive fugitive dust emissions are prevented. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

(c) Emissions from all fugitive sources related to the operation of the quarry shall be controlled so that no visible emissions from these sources, as measured using Method 22 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04, cross the facility's property line.

(d) Emissions from activities not associated with processing equipment, including but not limited to roads, other areas used by haul trucks, storage piles and drilling, shall be controlled so that visible emissions do not exceed 5% opacity at the source.

(e) Roads and other areas used by haul trucks shall be paved with asphalt, concrete or other material approved by the department, or treated by other methods of dust control which the department approves for the particular road, driveway or trafficable area so that the visible emissions limits of pars. (c) and (d) are met. Other methods of dust control which may be approved by the department include but are not limited to periodic application of water or suitable chemicals provided the application does not create a hydrocarbon, odor or water pollution problem. In reviewing and approving other materials or methods for compliance with this subsection, the department shall consider the effects of the use of paving or other methods of dust control upon the rate and volume of surface water runoff and water quality. All roads and other areas, if paved, shall be kept free of material likely to become airborne, through a program of periodic cleaning.

(4) AMBIENT AIR MONITORING. (a) Except as provided in par. (b), the owner or operator of any operation subject to the provisions of this section shall set up, operate and report the results obtained with a particulate matter ambient air monitoring system. The monitoring system shall comply with all of the following requirements:

1. A plan that describes the ambient air monitoring program shall be submitted to the department within 30 days of the date of issuance of a permit under ch. NR 406 or 407.

2. The department shall review the plan to determine whether it will provide accurate and reliable monitoring at the operation site. Department approval, conditional approval or disapproval of

any ambient air monitoring plan shall be completed within 60 days of receipt of the plan.

3. Monitoring for particulate matter shall be conducted for a 24-hour period on the 6 day schedule established by the U.S. environmental protection agency, or more frequently if required by the department. The department shall specify the schedule in the approved plan.

4. Monitoring results shall be submitted to the department on a monthly basis. Results for each month shall be postmarked or received by the department no later than the last day of the following month.

5. The owner or operator shall start monitoring by 120 days from the date of permit issuance under ch. NR 407 or as specified in the ambient air monitoring plan for any source subject to the permit requirements of ch. NR 406.

(b) The owner or operator of a source may apply for, and the department may grant, a variance from the monitoring requirements of this subsection if the applicant demonstrates that the general public will not be exposed to significant levels of particulate matter from the source, and that the source's emissions units and processes are controlled to a level which meets all applicable requirements. The department may review any variance granted under this paragraph on a biennial basis. Following its review, the department may modify, extend or rescind the variance.

(5) RECORDKEEPING. Each owner or operator of any ledge rock quarry or industrial sand mine shall keep the following records. Recordkeeping and access to these records shall be in accordance with ss. NR 439.03 to 439.05.

(a) Records of actual operation on a monthly basis.

(b) Records of actual production on a monthly basis.

(6) FUGITIVE DUST CONTROL PLAN. (a) Each owner or operator of any ledge rock quarry or industrial sand mine shall prepare a fugitive dust control plan to prevent, detect and correct malfunctions, equipment failures or other circumstances which may cause any applicable emission limitation to be violated or which may cause air pollution. The plan shall be in writing, and updated as needed, and shall include all of the following:

1. Identification of the individual responsible for implementing the fugitive dust control plan.

2. The maximum intervals for inspection and routine maintenance of fugitive dust control equipment, including a description of the items or conditions that will be checked.

3. Schedules for watering, treating or periodic cleaning of roads, trafficable areas and storage piles.

4. A listing of materials, equipment and spare parts that will be maintained in inventory.

5. Other information as the department may deem pertinent.

(b) The department may order any owner or operator to submit the plan required by par. (a) to the department for review. The department may request any owner or operator to amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions.

(c) No owner or operator may fail to implement the plan required under par. (a) or as amended under par. (b).

(d) All air pollution control equipment shall be operated and maintained in conformance with good engineering practices to minimize the possibility for the exceedance of any emission limitations.

History: Cr. Register, June, 1994, No. 462, eff. 7-1-94; am. (2) (a) 5. and (3) (c), Register, December, 1995, No. 480, eff. 1-1-96.

NR 415.076 Particulate emission limitations for crushed stone and sand and gravel plants. (1) APPLICABILITY. (a) Except as provided in par. (b), the provisions of this section are applicable to the following direct or portable sources in fixed or portable crushed stone and sand and gravel plants; each

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crusher, screening operation, bucket elevator, belt conveyor or storage bin.

(b) Direct or portable sources at the following plants are not subject to the provisions of this section:

1. Fixed sand and gravel plants and fixed crushed stone plants with capacities of 25 tons per hour or less.
2. Portable sand and gravel plants and portable crushed stone plants with capacities of 150 tons per hour or less.

(2) FUGITIVE DUST CONTROL. No person may cause, allow or permit any crusher, screen, bucket elevator, belt conveyor, storage bin or any transfer point on belt conveyors to be used without taking precautions to prevent particulate matter from becoming airborne. These precautions shall be taken to the extent necessary so that any applicable requirements are met and shall include one or more of the following:

(a) Use, where possible, of water, or chemicals approved by the department, for control of dust.

(b) Installation and use of hoods, enclosures, buildings, fans and air cleaning devices to enclose and vent the areas where materials are handled.

(c) The use of spray bars or other wet dust suppression methods.

(d) Any precautions proposed by the owner or operator and accepted by the department.

(e) Use of no precautions where control measures are unnecessary due to site or meteorological conditions.

History: Cr. Register, June, 1994, No. 462, eff. 7-1-94.

NR 415.08 RACT requirements for coking operations. (1) This section applies to all coking operations.

(2) Visible emissions from charging procedures shall be limited by the application of RACT. RACT includes:

(a) The use and maintenance of suitable jumper pipes and leveling bar smoke boots,

(b) The use and maintenance of suitable seals on larry car drop sleeves and leveling bar smoke boots,

(c) The use and maintenance of a steam aspiration system which provides maximum safe levels of negative pressure on the oven chamber during the charging operation, and

(d) The completion of each charging procedure, including sweeping excess coal into the oven just charged, as quickly as possible.

(3) Fugitive emissions from pushing operations shall be captured by a traveling hood and controlled to not more than 0.080 pounds of particulate matter per 1000 pounds of exhaust gas. Any emissions escaping capture may not exceed 20% opacity for each pushing operation, as determined by the average of 6 consecutive observations made at 15 second intervals.

(4) There may be no visible emissions from 90% of the doors of all coke ovens in use; 95% of all coke oven charging port lids on ovens in use; and 90% of all offtake piping on ovens in use, except those open for charging, pushing, cleaning and maintenance as determined by a one pass observation.

(5) Quench towers for the application of water on hot coke shall be equipped with grit arrestors or equivalent equipment approved by the department. Water used in quenching may not include coke by-product plant effluent, and total dissolved solids in make-up quenching water shall be less than 750 milligrams per liter.

(6) Coke oven combustion stacks may not emit more than 0.10 pounds of particulate matter per 1000 pounds of exhaust gas or have visible emissions greater than 20% opacity.

History: Renum. from NR 154.11 (7) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (3) and (5), Register, May, 1992, No. 437, eff. 6-1-92; am. (1), Register, December, 1995, No. 480, eff. 1-1-96.

NR 415.09 Compliance schedule for sources of condensible particulate matter. (1) GENERAL COMPLIANCE

SCHEDULE. If a source on which construction or modification was last commenced on or before July 1, 1975, other than a heatset web offset press, fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or concentrations, the owner or operator of the source shall achieve final compliance with the applicable limitation by October 1, 1990.

(2) COMPLIANCE SCHEDULE FOR HEATSET WEB OFFSET PRESSES. If a heatset web offset press on which construction or modification was last commenced on or before July 1, 1975 fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or concentrations, the owner or operator of the source may not exceed the following increments of progress in achieving compliance with that limit:

(a) Submit plans for achieving compliance or request a variance in accordance with the provisions of sub. (3) (a) by July 1, 1993.

(b) Award any necessary contracts by July 1, 1994.

(c) Commence construction, installation or modification of any emission control system by December 31, 1994.

(d) Complete construction, installation or modification of any emission control system by July 1, 1995.

(e) Achieve final compliance with the applicable emission limit by December 31, 1995.

(3) VARIANCE. Notwithstanding sub. (2), the owner or operator of a source constructed or modified on or before July 1, 1975 which fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or concentrations may request in writing a variance from the emission limitation from the department under par. (a) on or before July 1, 1993 if the source is a heatset web offset press.

(a) The department may grant a variance under this paragraph and set an alternate emission limitation under the criteria and procedures outlined in s. NR 436.05 (2) and (3) if compliance with the emission limitation is shown to be technologically or economically infeasible.

(b) The department shall grant a variance under this paragraph and set an alternate emission limitation if the following criteria are met:

1. The variance will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

2. The applicable particulate emission limitation for the air contaminant source for which a variance is requested was promulgated on or before October 1, 1987.

3. The request for variance includes the report of a test conducted according to the methods and procedures of s. NR 439.07, for the air contaminant source for which the variance is requested, which demonstrates noncompliance with the applicable particulate emission limitation.

4. The air contaminant source for which a variance is requested is not reasonably capable of complying with the applicable emission limitation except by means of the installation and operation of an electrostatic precipitator, fabric filter baghouse or wet scrubber for particulates or the source is equipped with such a control device and demonstrates to the department's satisfaction that compliance is still not achievable.

(c) The department may revoke or modify any variance granted under this subsection in accordance with the provisions of s. NR 436.05 (4).

History: Cr. Register, September, 1987, No. 381, eff. 10-1-87; am. (1) (intro.) and (c), renum. (2) to be (3) and am. (intro.), cr. (2), Register, April, 1989, No. 400, eff. 5-1-89; am. (1) (intro.), (3) (intro.), r. (1) (a) to (e), Register, December, 1995, No. 480, eff. 1-1-96.

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Chapter NR 431

CONTROL OF VISIBLE EMISSIONS

NR 431.01 Applicability; purpose.
NR 431.02 Definitions.
NR 431.03 General limitations.

NR 431.04 Emission limitations on or before April 1, 1972.
NR 431.05 Emission limitations after April 1, 1972.
NR 431.07 Establishing alternate opacity limits.

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

NR 431.01 Applicability; purpose. (1) APPLICABILITY. This chapter applies to all air contaminant sources and to their owners and operators.

(2) PURPOSE. This chapter is adopted under ss. 285.11, 285.13 and 285.17, Stats., to categorize air contaminant sources and to establish visible emission limitations for these sources in order to protect air quality.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (1), Register, May, 1992, No. 437, eff. 6-1-92.

NR 431.02 Definitions. The definitions contained in ch. NR 400 apply to the terms used in this chapter.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. Register, May, 1992, No. 437, eff. 6-1-92.

NR 431.03 General limitations. No person may cause, allow or permit emissions into the ambient air from any direct or portable source in excess of one of the limits specified in this chapter. Where the presence of uncombined water is the only reason for failure to meet the requirements of this chapter, such failure is not a violation of this chapter.

History: Renum. NR 154.11 (6) (intro.) and am., Register, September, 1986, No. 369, eff. 10-1-86; am. Register, May, 1992, No. 437, eff. 6-1-92.

NR 431.04 Emission limitations on or before April 1, 1972. All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this section.

(1) No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringlemann chart or 40% opacity. Exceptions listed in s. NR 431.05 shall apply.

(2) No owner or operator of a direct or portable source located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeastern Wisconsin Intrastate AQCR may, after July 31, 1975, cause or allow emissions of shade or density greater than number 1 of the Ringlemann chart or 20% opacity. Exceptions listed in s. NR 431.05 shall apply.

History: Renum. NR 154.11 (6) (b) and am., cr. (2), Register, September, 1986, No. 369, eff. 10-1-86; correction in (2) made under s. 13.93 (2m) (b) 6., Stats., Register, July, 1988, No. 391; am. (1) and (2), Register, May, 1992, No. 437, eff. 6-1-92.

NR 431.05 Emission limitations after April 1, 1972. No owner or operator of a direct or portable source on which construction or modification is commenced after April 1, 1972 may cause or allow emissions of shade or density greater than number 1 of the Ringlemann chart or 20% opacity with the following exceptions:

(1) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not exceed number 4 of the Ringlemann chart or 80% opacity for 5 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day.

(2) Emissions may exceed number 1 of the Ringlemann chart or 20% opacity for stated periods of time, as permitted by the department, for such purpose as an operating test, use of emer-

gency equipment, or other good cause, provided no hazard or unsafe condition arises.

(3) For direct or portable sources in operation on or before February 1, 1975, where emission test data taken concurrently with opacity readings or continuous emission monitor data show the source to be in compliance with the applicable emission limits but not the opacity limits, an alternative opacity limit may be established according to methods and procedures in s. NR 431.07.

History: Renum. NR 154.11 (6) (a) (intro.) and 1. and am., cr. (2), Register, September, 1986, No. 369, eff. 10-1-86; am. (1) (c), Register, April, 1987, No. 376, eff. 5-1-87; correction in (2), made under s. 13.93 (2m) (b) 6., Stats., Register, July, 1988, No. 391; am. (intro.) and (1), r. (2), Register, May, 1992, No. 437, eff. 6-1-92.

NR 431.07 Establishing alternate opacity limits. The department may set an alternate opacity limit for a source according to the criteria and certification procedures in this section.

(1) SOURCE CRITERIA. A source is eligible for an alternate opacity limit if it meets all of the following criteria:

(a) The source of emissions is not a fugitive emission source.

(b) The source is subject to an emission limitation in the form of a mass rate, stack gas concentration, or a fuel requirement for all pollutants that contribute to the opacity of a source's emissions.

(c) All emission units subject to the alternate opacity request are in compliance with all applicable provisions of chs. NR 400 to 499, ch. 285, Stats., and all permit conditions with the exception of visible emission limits.

(d) The owner or operator of the source installs and operates a continuous emission monitor (CEM) for opacity that meets the performance specifications in s. NR 439.09.

(e) The source is operated and maintained in such a manner as to minimize opacity through measures which are not discontinued once an alternate opacity limit is established.

(2) PROCEDURES. The procedure for establishing an alternate opacity limit is as follows:

(a) The source owner or operator shall notify the department in writing of its request to establish an alternate opacity limit at least 45 days prior to the performance of any testing for the purpose of establishing an alternate opacity limit. This notice shall include both of the following:

1. A test plan complying with s. NR 439.07.

2. A quality assurance plan for the operation of a continuous emission monitor.

(b) The department shall review the notice required in par. (a) and shall approve, approve with conditions or disapprove the test and quality assurance plans within 30 days after receipt of the notice.

(c) Not more than 30 days prior to the emission test, the continuous emission monitor shall pass a performance specification test as required by s. NR 439.09 (1) and a quarterly calibration error audit as required under s. NR 439.09 (8).

(d) If a continuous emission monitor exemption is granted under sub. (3), the department shall provide a person who is certified in visible emission evaluation to read opacity throughout the entire emission test period.

(e) Opacity data shall be collected throughout the entire emission test period.

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(f) The emission testing shall be conducted in accordance with the methods and procedures of ch. NR 439.

(3) EXEMPTION FROM CONTINUOUS EMISSION MONITOR REQUIREMENT. The department may exempt a source owner or operator from the continuous emission monitor requirements in subs. (1) (d) and (2) if the following conditions are met:

(a) The source owner or operator requests an exemption in filing the notice required under sub. (2) (a).

(b) The source owner or operator demonstrates that the continuous emission monitor for opacity will not give representative readings.

(c) The department reviews and approves the request for exemption.

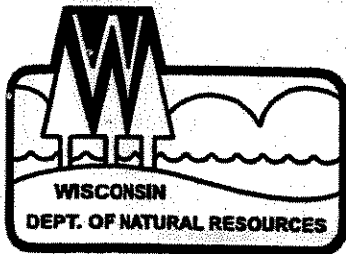
(4) CALCULATION OF THE ALTERNATE OPACITY LIMIT. To calculate an alternate opacity limit:

(a) The average opacity during each repetition of the performance test shall be determined by summing the individual readings taken during that repetition, by a continuous emission monitor for opacity or the department's observer, and dividing the sum by the number of readings.

(b) The alternate opacity limit shall be established at 10% opacity above the arithmetic mean rounded to the nearest whole number of the average opacity values determined for each performance test repetition which demonstrates compliance with all other applicable emission limits.

(5) RESTRICTION ON ESTABLISHING LIMIT. No alternate opacity limit may be established under this section if any other applicable emission limit would be violated by the source when operating at an opacity established under sub. (4).

History: Cr. Register, April, 1987, No. 376, eff. 5-1-87; am. (1) (d), (2) (a) 1. and (c), Register, May, 1992, No. 437, eff. 6-1-92; am. (2) (c), Register, December, 1993, No. 456, eff. 1-1-94; am. (1) (a) (intro.), Register, December, 1996, No. 492, eff. 1-1-97.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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November 18, 1998

Hillsboro Farmers Cooperative
140 Short Street
Hillsboro, Wisconsin 54634-0429

File: 4530-2
FID 663054590
Vernon County

SUBJECT: LETTER OF INQUIRY
Hillsboro Farmers Cooperative Grain Drying and Storage Facility

Dear _____

The Department of Natural Resources, Air Management Program conducted a site visit on October 23, 1998 of the Hillsboro Farmers Cooperative Grain Drying and Storage Facility. The site visit was made to address a complaint filed by a citizen concerning grain dust (generated by the facility) coating nearby vehicles and buildings.

The site visit found the facility was sited and constructed during 1998 and began operating approximately October 7, 1998. The facility is located along State Highway 33 and County HH, about 1.5 miles east of the City of Hillsboro. The facility is located on 10 acres (formerly farm land) adjacent to a mobile home park and a nearby construction business. The facility currently is constructed to dry grain and store 875,000 bushels of grain. The facility anticipates providing storage for 2,400,000 bushels of grain. The grain dryer is a Zimmerman AT4035, designed to dry 4,000 bushels per hour at 5% moisture reduction. The burners are designed at 22,200,000 btu/hour heat input of liquid petroleum gas. Two open-air truck dump stations with underground conveyors are provided to receive the grain. A variety of vented storage bins are provided. Overhead load-out tanks for dried grain and grain screenings are located above one of the truck dump stations. A head-house and legs are used to move grain into each storage bin. A portion of the facility's roadways are paved with asphalt, with the remainder with limestone gravel. No grain dust control systems or enclosures for truck unloading or loading are provided. A cursory evaluation of visible emissions from trucks unloading grain or loading grain screenings found; bottom-dump hopper trailers using choke-feed at the unloading pit were 20% opacity, rear-dump trucks with 3 to 4 feet of grain free-fall at the unloading pit were 40% to 60% opacity, farm field wagons with 2 to 3 feet of grain free-fall at the unloading pit were 40% to 60% opacity, Hillsboro Farmers Cooperative feed grain trucks with 8 to 10 feet of grain free-fall at the unloading pit were 50% to 80% opacity, open-top truck while loading grain screenings were 50% to 80%. Considerable amounts of corn cobs and other light material were emitted while loading open-top trucks with grain screenings and while unloading trucks. The grain dryer was not evaluated during this site visit, as it was not operating.

We reviewed Wisconsin's air pollution rules to determine if the facility is required to obtain any air pollution control permits. The Wisconsin Administrative Code, NR 406.04(1)(cm) and 407.03(1)(cm) provide a specific categorical exemption from an air pollution control construction and operation



Quality Natural Resources Management
Through Excellent Customer Service



permits when a grain processing facility received less than 4500 tons per month (12 month average) of grain and are not subject to s. NR [redacted] and which are not part 70 sources. The facility is found to be exempt from obtaining an air pollution control permit until such time it processes 2,000,000 bushels of grain/calendar year. The facility must keep records sufficient to determine the monthly and yearly amount of grain processed, and provide those records when requested by the Department, according to s. NR 406.04(7) and 407.03(4)(a), of the Wisconsin Administrative Code.

Although the facility is not required to obtain an air pollution control permit at this time, the facility is subject to requirements established by the Wisconsin Administrative Code. Section NR 415.04 Control of Particulate Emissions - Fugitive Dust provides; "No person may cause, allow, or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne... (1) Such precautions shall include, but not be limited to: c. - Installation and use of hoods, fans, and air cleaning devices to enclose and vent the areas where dusty materials are handled... f. - The paving or maintenance of roadway areas so as not to create air pollution." Section NR 431.05 Control of Visible Emissions - Emission limitations after April 1, 1972 provides; "No owner or operator of a direct or portable source on which construction or modification is commenced after April 1, 1972 may cause or allow emissions of shade or density greater than number 1 of the Ringelmann chart or 20% opacity...". The Department is concerned about the citizen complaint and the fugitive emissions observed during the October 23, 1998 site visit.

The Department requests Hillsboro Farmers Cooperative to provide a fugitive emissions control plan within 60 days of receiving this Letter of Inquiry. This plan is to discuss measures which will be developed and a schedule to implement by Hillsboro Farmers Cooperative in order to comply with the regulatory requirements of s. NR 415.04 and 431.05, of the Wisconsin Administrative Code. The Department suggests a consultant, familiar with air pollution control, review the operation and provide the facility with direction on appropriate methods to control fugitive emissions.

Should you have any questions concerning this Letter of Inquiry or other air pollution matters, please contact us at (telephone) 608-785-9978.

Sincerely,

Thomas P. Stibbe
Thomas P. Stibbe, P.E.
Environmental Engineer

- c: Mr. Paul Stekel, Manager, Hillsboro Farmers Cooperative
- Mr. Duane Johnsrud, Legislator
- Ms. Eileen Ingwersen, Air Program Supervisor, Wisconsin Rapids
- Ms. Lloyd Eagan, Bureau Director - Air Management

Lou Schweigert
North-Gro Seeds, Inc.
613 N. Randolph St.
Cuba City, WI 53807

12-14-98

Assembly Environment Committee
State Capital
Madison, WI

RE: Fugitive Dust Hearing

For your consideration:

My wife and I are the owners of North-Gro Seed Company located in Cuba City, WI. This business was started by my father in 1941. We are proud to have been citizens and business people of this state for over fifty seven years. Recently, however, a very real concern threatens our very existence. This concern is fugitive dust.

In our seed operation we must handle the corn through several machines that shell, clean and size. When corn is handled, the very tip of the kernel may come loose (bees wings). This material is light and will float in the air. Over the last two years we have had one neighbor complain about the material. The local government and enforcement agencies of Cuba City have investigated this matter thoroughly and have determined that the amount of dust is not a problem. This neighbor has since taken his complaint to the DNR which investigated us this Fall. I was very surprised that the DNR had jurisdiction in this matter and to my knowledge had not been requested by any local authorities to be involved.

At the point of DNR involvement the whole character of this situation changed. Local government and authorities as well as myself became very confused at what the expectations of the DNR were. Upon my request, the DNR provided a written answer that basically says we are in compliance as long as no one complains. Over the last several years we have implemented several costly measure that have helped the dust situation. Local government and all of the other neighbors have complimented us on our efforts. We will continue to voluntarily better the situation as my family lives in this community also.

Frankly, I feel the DNR would better serve the taxpayers by focusing on fish and game regulations. This was a local issue that was being properly addressed by local agencies. Our dust situation is only for thirty to forty days per year and contains no health concerns whatsoever. I am very fearful that their involvement may cause the closing of my facility. I feel we are an important employer and add to the business base of the area (six million dollar annual budget). I also feel we are excellent citizens that contribute in many ways to the community. What a shame if an outside agency like the DNR and one resident with multiple motives could end it all.

Thank you for your time and consideration,


Lou Schweigert - owner, North-Gro Seeds



DALE W. SCHULTZ
Wisconsin State Senator

November 12, 1998

Representative Marc Duff, Chair
And, Members
Assembly Environment Committee

Dear Committee Members,

I wish to voice my concerns regarding the recently adopted practices by the Wisconsin Department of Natural Resources related to enforcement of issues of "Particulate Emissions" or "Fugitive Dust."

A few months ago, an important employer in my district contacted my office regarding a contact with a department Conservation Warden. The Conservation Warden had come to this manufacturing facility and informed the owner that the department had received a complaint from a neighbor regarding "dust".

Based on a single complaint from a single citizen, this representative of the Department of Natural Resources threatened to issue numerous citations to this facility for "littering". (Written testimony from this constituent has been submitted to the committee, North Gro Seeds.)

My office intervened, and in subsequent conversations with department personnel, on both the field and management levels, it was learned that the department had not contacted local officials in the community in an attempt to determine if the community felt there was a problem. They had interviewed only one neighbor, (the agitator.) After a determination that they had no authority under Air Quality regulations, they decided to threaten this manufacture with the presence of a uniformed Conservation Warden, citing the littering laws in hopes of getting costly and unnecessary modifications to normal manufacturing practices.

I ask you? Is this appropriate use of Conservation Wardens? Our Warden staff is overwhelmed with an array of duties having little or nothing to do with field enforcement of fish and game laws. Conservation Wardens salary is paid primarily from the fish and game account. As the Vice-Chairman of the Special Committee on Conservation Law Enforcement we have heard testimony on many such enforcement practices which should not be a part of a Conservation Wardens duties.

Member: Joint Committee on Finance

State Capitol, P.O. Box 7882, Madison, WI 53707-7882
OFFICE: 608-266-0703 • HOME: 608-647-4614
CALL TOLL-FREE: 1-800-978-8008

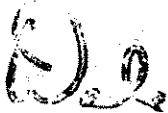
If the air quality division of the Department of Natural Resources feels that non toxic, organic dust, which is part of a farming or manufacturing process, is a threat to the health and welfare of the public, then let them enforce the rules themselves. If the rules have no provision for enforcement, let them come to the legislature and ask for the authority. But to fish around the rules and statutes to find language which fits a complaint and then use the Conservation Warden staff to attempt an enforcement, borders on government intrusion.

Where do we draw the line between what is necessary and what is ridiculous? Do we call The DNR after our freshly washed car gets dust on it from driving through a construction zone? Do we complain to air quality enforcement when laundry on our clothesline becomes soiled from our neighbor plowing his field? Should we call a warden when wildlife soils our hat or our lawn? Or, do we accept that living, eating, and working, the things that drive our economy and our state are necessary. Life is not and never will be perfect. It should not be the duty of the Department of Natural Resources to attempt to make it so.

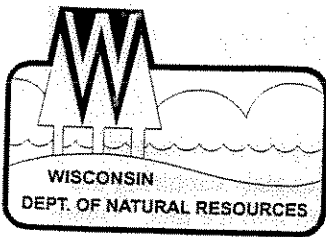
We need government agencies to be reasonable and prudent if we expect to keep a healthy manufacturing and farming economy in our state.

This is a prime example of why the Department of Natural Resources needs to become more accountable to the people of the state and the legislature. Lets keep unreasonable practices such as this in mind when we debate whether the Secretary of the Department and the Natural Resources Board should remain accountable to the Governor and the Legislature.

With kindest regards



Dale W. Schultz
17th Senate District



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

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Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
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November 24, 1998

The Honorable DuWayne Johnsrud
Member of Assembly
Room 323 North
State Capital

SUBJECT: Air Management Interaction with Feed Mills

Dear Representative Johnsrud:

I appreciated talking to you this morning about your concerns regarding the Department's interaction with feed mills and our follow up on complaints. As I mentioned on the phone, I will discuss your concerns about the manner in which DNR employees (and more specifically SCR and WCR staff) interact with the farming community as a whole and with owners of grain handling facilities in particular. I believe we must be courteous and professional in all of our interactions with people we regulate. I will do what I can within the agency to ensure this happens. In addition, I wanted to take this opportunity to provide an overview of our responsibilities under the Air Pollution Control Rules.

During the past two years we have worked with Wisconsin Agri-Service Association, and Wisconsin Federation of Cooperatives to develop exemption levels such that small and medium sized feed mills and grain elevators do not need to get air permits. This saves them from registering with the Department and paying fees. Although exempt from permitting, these facilities must still meet applicable environmental requirements.

In general, small grain handling facilities are not targeted for inspection. However if a citizen complaint is received, this will usually generate a phone contact or onsite investigation to determine the source of the complaint and severity of the problem. The Department understands that facilities such as feed mills will have some amount of dust associated with their operations. Rules establish limits for the emission of dust from grain processing and handling, whether the emissions are vented from stacks or emitted as fugitives. We often find that problems are caused by poor zoning, where residents and feed mills are built too close together, without a buffer zone between them. However even with poor zoning, the Department must work with sources to protect the air quality for nearby homes and other commercial establishments.

Many of the complaints we receive are related to the use of corn dryers, which tend to release dust and chaff. Also, the unloading of dusty grains in unsheltered dump areas, and the inadequate capture of dust from milling operations can release dust. This dust and chaff can settle on nearby cars, on windows, or hanging laundry causing nuisance conditions. It can also make air quality unhealthy for nearby residents.

When our staff investigations lead to a conclusion that operations at a feed mill are responsible for dust that is causing a nuisance to nearby residents, they try to work with the mill management to solve the problem without resorting to formal enforcement as much as possible. There are several options for controlling

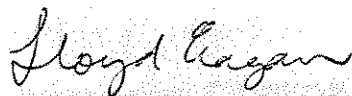
Quality Natural Resources Management
Through Excellent Customer Service



emissions that can be implemented. Most milling operations are usually controlled by cyclone collectors which are effective if the milled grain is not too fine or dusty. Where these are not adequately capturing the dust, fabric filters will normally solve the problem, and the escaping dust can be recycled into the feed. Dump pit areas can usually be controlled by the partial enclosure of the area, and tarps can be used to provide temporary enclosure. The chaff released by corn dryers is mainly a house keeping problem, which requires periodic cleanup before the material leaves the property. The closer the proximity of feed mills to neighbors, the higher the level of house keeping that will be needed to prevent nuisance conditions.

Generally, in dealing with complaints we find it advantageous for the mill management to develop communication with neighbors. We understand that even well controlled feed mills may have some small amount of fugitive emissions, and we will try to balance the job of working with mill management while protecting citizens from air pollution and nuisances. If you have any questions regarding this matter, please contact me at (608) 266-0603.

Sincerely,



Lloyd Eagan, Director
Bureau of Air Management

cc: Jay Hocmuth - AD/5
Regional A&W Leaders

