CR 93-49

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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STATE OF WISCONSIN)
) ss
DEPARTMENT OF NATURAL RESOURCES)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, George E. Meyer, Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. AM-4-93 was duly approved and adopted by this Department on February 24, 1994. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 19th day of April, 1994.

George E. Meyer
George E. Meyer, Secretary

(SEAL)

7-1-94

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES

IN THE MATTER of amending 484.03(intro.) and (5) and creating NR 400.02(1k), (1l), (17s), (21c), (21k), (26s), (40e), (47m), (51m), (60e), (60i), (69s), (81e), (81m), (96m) and (98s), 406.04(1)(x) to (zb), 407.03(1)(v) to (z), 415.01(2) Note, 415.075, 415.076, 484.04(1)(c) and 485.055 of the Wisconsin Administrative Code, pertaining to permit and control requirements for the aggregate industry.

AM-4-93

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 144.31 and 144.38, Stats.

Statutes interpreted: ss. 144.31, 144.375(4), 144.38 and 144.391(6) Stats.

The proposed rules represent changes in two types of requirements for owners/operators in the stone, sand, and sand and gravel industries. There are decreased requirements to apply for and obtain air permits. There are increased requirements for owners and operators of certain large permanent ledge rock quarries. There are also clarification and consolidation of current requirements to control fugitive dust emissions.

There is also a proposed change to the particulate emission limitation for the gasoline and diesel reciprocating engines that are used by facilities in this industry. A less stringent limitation is recommended.

The proposed rules for the aggregate industry would split the industry into two categories of sources. One category is the pits and quarries where the stone, sand, and sand and gravel is extracted. The second category is the processing equipment, which includes the crushers and screens and equipment that is transported to the site to process the stone, sand, and sand and gravel.

One of the main things that the proposed rules do, is to create new permit exemptions for both the site and the equipment. Any sand or gravel pit and any small or temporary ledge rock quarry would be exempted. Ledge rock quarries that are both large and permanent would still be required to obtain permits. Currently all pits and quarries are required to get permits. The proposed rules also create a new permit exemption for certain equipment of small production capacity.

The proposed rules also clarify the dust control requirements for both categories of sources. Requirements for owners and operators of large permanent ledge rock quarries are set at levels currently being put into permits on a case-by-case basis. Requirements to perform monitoring of the concentration of total suspended particulate matter in the ambient air near any large permanent quarry are established. The proposal would establish increased requirements to control fugitive dust emissions from any large permanent ledge rock quarry located in a nonattainment area of the state where measurement indicates that the concentration of total suspended particulate matter in the ambient air exceeds Wisconsin standards for public welfare. There are no new requirements proposed for owners and operators of processing equipment but general requirements that do apply to them are repeated to clarify how they apply to this source category.

SECTION 1. NR 400.02(1k), (1l),(17s), (21c), (21k), (26s), (40e), (47m), (51m), (60e), (60i), (69s), (81m), (96m) and (98s) are created to read:

NR 400.02(1k) "Actual operation" means, for purposes of nonmetallic mineral quarrying or mining, the number of calendar days on which there is operation of any blasting, drilling or other movement or transfer of naturally occurring rock at a quarry or mine.

(1l) "Actual production" means, for purposes of nonmetallic mineral quarrying or mining, sales amount in tons of nonmetallic mineral as measured at the quarry or mine.

(17s) "Belt conveyor" means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

(21c) "Bucket elevator" means a conveying device of materials consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

(21k) "Capacity" means, for purposes of nonmetallic mineral processing, the cumulative rated capacity of all initial crushers that are part of a processing plant.

(26s) "Crusher" means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill and impactor.

(40e) "Fixed plant" means any nonmetallic mineral processing plant at which the processing equipment is attached or clamped by a cable, chain, turnbuckle, bolt or other means, except electrical connections, to any anchor, slab or structure including bedrock.

(47m) "Industrial sand mine" means any mine, pit or quarry to which the standard industrial classification (SIC) category number 1446 applies. The SIC category for a source is determined by reference to the Standard Industrial Classification Manual, 1987, which is incorporated by reference in ch. NR 484.

(51m) "Ledge rock quarry" means any open pit to which the standard

industrial classification (SIC) category number 1411, 1422, 1423 or 1429 applies where drilling and blasting is required to extract the nonmetallic mineral. The SIC category for a source is determined by reference to the Standard Industrial Classification Manual, 1987, which is incorporated by reference in ch. NR 484.

(60e) "Nonmetallic mineral" means any of the following minerals or any mixture of which more than half the weight is any combination of the following minerals:

(a) Crushed and broken stone, including limestone, dolomite, granite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale and shell.

(b) Sand and gravel.

(c) Clay including kaolin, fireclay, bentonite, Fuller's earth, Ball clay and common clay.

(d) Rock salt.

(e) Gypsum.

(f) Sodium compounds, including sodium carbonate, sodium chloride and sodium sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and pyrophyllite.

(j) Boron, including borax, kernite and colemanite.

(k) Barite.

(l) Fluorospar.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

(r) Kyanite, including andalusite, sillimanite, topaz and dumortierite.

(60i) "Nonmetallic mineral processing plant" means any combination of

equipment that is used to crush or grind any nonmetallic mineral wherever located, including but not limited to lime plants, power plants, steel mills, asphalt concrete plants and portland cement plants.

(69s) "Portable plant" means, with reference to any nonmetallic mineral processing plant, any plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there may be no cable, chain, turnbuckle, bolt or other means, except electrical connections, by which any piece of equipment is attached or clamped to any anchor, slab or structure, including bedrock, that would have to be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

(81e) "Rolling 12 month average" means, with reference to only ledge rock quarries and industrial sand mines, a monthly average calculated each month by adding the total actual production of the preceding 12 calendar months, and dividing the total by 12. If a new quarry has been in existence for less than 12 calendar months, then the average shall be calculated by adding the total actual production since initial operation, and dividing the total by the number of calendar months subsequent to and including the month of initial operation.

(81m) "Screening operation" means a device for separating material according to size by passing undersize material through one or more mesh surfaces, screens or similar surfaces in series, and retaining oversize material on the mesh surfaces, screens or similar surfaces. Screening operation includes any grizzly, rotating screen or deck type screen. Screening operation does not include washers that are designed to remove unwanted or unnecessary material from the product.

(96m) "Storage bin" means a facility for storage, including surge bins, for nonmetallic minerals prior to further processing or loading.

(98s) "Transfer point" means a point in a conveying operation where a nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile from a belt conveyor.

SECTION 2. NR 406.04(1)(x) to (zb) are created to read:

NR 406.04(1)(x) Any quarry, mine or other facility where nonmetallic minerals are extracted that is not a ledge rock quarry or industrial sand mine.

(y) Ledge rock quarries with actual production of less than 25,000 tons per month on a rolling 12 month average, or with actual operation of less than 365 days per 5 year period.

(z) Industrial sand mines with actual production of less than 2,000 tons per month on a rolling 12 month average.

(za) Fixed sand and gravel plants and fixed crushed stone plants with capacities of 25 tons per hour or less.

(zb) Portable sand and gravel plants and portable crushed stone plants with capacities of 150 tons per hour or less.

SECTION 3. NR 407.03(1)(v) to (z) are created to read:

NR 407.03(1)(v) Any quarry, mine or other facility where nonmetallic minerals are extracted that is not a ledge rock quarry or industrial sand mine.

(w) Ledge rock quarries with actual production of less than 25,000 tons per month on a rolling 12 month average, or with actual operation of less than 365 days per 5 year period.

(x) Industrial sand mines with actual production of less than 2,000 tons per month on a rolling 12 month average.

(y) Fixed sand and gravel plants and fixed crushed stone plants with capacities of 25 tons per hour or less.

(z) Portable sand and gravel plants and portable crushed stone plants with capacities of 150 tons per hour or less.

SECTION 4. NR 415.01(2) Note is created to read:

NR 415.01(2) Note: Particulate emission limitations are also established in chs. NR 431 and 440 and ss. NR 485.05 and 485.055.

SECTION 5. NR 415.075 is created to read:

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) of this section:

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.

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

5. The use of 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 PM_{10} 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 ch. NR 484, 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.

SECTION 6. NR 415.076 is created to read:

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 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.

SECTION 7. NR 484.03(intro.) and (5) are amended to read:

NR 484.03(intro.) CODE OF FEDERAL REGULATIONS AND OTHER MATERIALS IN CHS. NR 400 TO 404. The federal regulations or appendix materials in effect on ~~July 1, 1990~~ July 1, 1993 and other materials listed in this section are incorporated by reference for the corresponding sections of chs. NR 400 to 404. Copies of these materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use from the superintendent of documents, U.S. government printing office, Washington, DC 20402, or from the organization listed in the applicable subsection.

(5) Standard Industrial Classification Manual, 1987, for s. NR

400.02(47m), (51m) and (91). Copies may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield VA 22161 using order no. PB 87-100012.

SECTION 8. NR 484.04(1)(c) is created to read:

NR 484.04(1)(c) Method 22 in Appendix A of 40 CFR part 60 for s. NR 415.075(3)(c).

SECTION 9. NR 485.055 is created to read:

NR 485.055 PARTICULATE EMISSION LIMIT FOR GASOLINE AND DIESEL INTERNAL COMBUSTION ENGINES. No person may cause, allow or permit the emissions of particulate matter to the ambient air from stationary or semistationary gasoline or diesel powered internal combustion reciprocating engines in excess of 0.50 pounds of particulate per million Btu heat input.

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on February 24, 1994.

The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin April 19, 1994.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By George E. Meyer
George E. Meyer, Secretary

(SEAL)