

STATE OF MICHIGAN  
DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF THE DIRECTOR

\_\_\_\_\_  
)  
In the matter of administrative proceedings )  
involving the **WYANDOTTE MUNICIPAL POWER** )  
**PLANT**, a municipal utility organized under )  
the laws of the State of Michigan and doing )  
business at 2555 VanAlstyne, in the City )  
of Wyandotte, County of Wayne, State of )  
Michigan. )  
\_\_\_\_\_)

SIP No. 34-1993  
Revised: 9/9/94

STIPULATION FOR ENTRY OF FINAL ORDER  
BY  
CONSENT

This proceeding results from provisions of the Federal Clean Air Act ("CAA"), 42 U.S.C. Section 7401 et seq., as amended by the Clean Air Act Amendments of 1990, P.L. No. 101-549, 104 Stat. 2399 (Nov. 15, 1990), that designate a portion of Wayne County as non-attainment for PM-10 (particulate matter less than 10 micrometers) and require a State Implementation Plan ("SIP"), based on legally enforceable control measures, that provides for a demonstration of attainment and maintenance of the primary National Ambient Air Quality Standard ("NAAQS") for PM-10 in Wayne County. Further, pursuant to Section 15 of the Michigan Air Pollution Act, 1965 PA 348, as amended ("Act 348"), companies in the standard industrial classifications listed in 15(1), and which are located in areas listed in Table 36 of R 336.1371 of the Michigan administrative code, are required to develop and implement an approved fugitive dust control operating program and to have the program embodied in a legally enforceable order or as part of an approved permit to install or operate.

The City of Wyandotte owns and operates the Wyandotte Municipal Electric Plant ("Plant"), which is a municipal utility ("Utility"), located at 2555 VanAlstyne, City of Wyandotte, County of Wayne, State of Michigan. The Michigan Department of Natural Resources ("MDNR") alleges that the Plant is a significant source of fugitive dust emissions which contribute to the non-attainment problem. Further, the requirements for the control of fugitive dust, set forth in Section 15 of Act 348, apply to the Plant.

The Utility and the MDNR stipulate as follows:

1. The Air Pollution Act, 1965 PA 348, as amended, ("Act 348"), MCL 336.11 et seq; MSA 14.58(1) et seq is an act to control air pollution in this state.
2. The Director of the MDNR ("Director") is authorized pursuant to Section 5 of Act 348 to administer and enforce all provisions of Act 348.
3. The Director has delegated authority to the Air Quality Division ("AQD Chief") to enter into the Consent Order.
4. The resolution of this matter by a Consent Order pursuant to Section 16c of Act 348 is proper and acceptable.
5. This Consent Order becomes effective on the date of execution ("effective date of this Consent Order") by the AQD Chief.
6. The emissions of fugitive dust from the Plant are subject to the opacity limitations and prohibitions contained in Sections 15 and 15a of Act 348. The particulate matter and fugitive dust emissions from the Plant must not cause or contribute to a violation of the PM-10 NAAQS. Further, the CAA and Act 348 require the application of all reasonably available control measures ("RACM") for the control of PM-10 emissions.

7. This Consent Order is designed to ensure attainment and maintenance of the PM-10 NAAQS, compliance with Sections 15 and 15a of Act 348, and compliance with the RACM requirements of the CAA and Act 348.

COMPLIANCE PROGRAM

8. On and after the effective date of this Consent Order, the Utility shall fully comply with the provisions and requirements of the fugitive dust control operating program and Recordkeeping for Fugitive Dust Sources Addendum, which is attached as Exhibit A, incorporated by reference, and made an enforceable part of this Consent Order.

RECORDKEEPING AND REPORTING

9. On and after the effective date of this Consent Order, the Utility shall keep records as specified in Exhibit A.

10. On and after the effective date of this Consent Order, the records required pursuant to this Consent Order shall be kept on file at the Utility for a period of at least two (2) years, and shall be made available to MDNR upon written or verbal request.

11. Beginning with the calendar quarter starting after the effective date of this Consent Order, and quarterly thereafter, the Company shall submit to MDNR a report identifying each day in which any emission limit, operational requirement, or recordkeeping requirement, as specified in Exhibit A, was not met. This report shall, for each instance, explain the reason that the emission limit, operational requirement, or recordkeeping requirement was not met, the duration of the event, the remedial action taken, and a description of the steps which were taken to prevent a recurrence. These reports shall be submitted

within 30 days following the end of the calendar quarter in which the data were collected. The first such report shall be submitted no later than January 30, 1994.

#### GENERAL PROVISIONS

12. Upon entry, this Consent Order, along with other supporting documentation required by the United States Environmental Protection Agency ("U.S.EPA"), shall be submitted to the U.S.EPA for approval as a revision to the Michigan SIP in accordance with Part D, Section 171 et seq., of the Federal Clean Air Act, as amended by Section 105 of the Clean Air Act Amendments of 1990. This Consent Order shall become effective immediately upon entry, except that this Consent Order shall have no effect on the federally-approved SIP unless and until the submitted SIP revision request is formally approved by the U.S.EPA.

13. Upon entry of this Consent Order, the Company may change it's processes, modify the fugitive dust control program contained in Exhibit A, or modify the particulate emission control program contained in Exhibit B ("Control Programs"), in accordance with the following:

#### A. Process Change

(1) The Company may change it's operations or processes which are sources of particulate and fugitive dust provided all of the following conditions are met:

(a) The provisions of the Control Programs continue to apply to the subject operation or process;

(b) The change does not result in an increase in the level of fugitive dust or particulate emissions;

- (c) The change is approved.
- (2) The Company shall submit to MDNR a written description of the proposed change and how it meets the requirements of 13(A)(1).
- (3) The MDNR shall approve or disapprove the proposed change, in writing, within 45 days from receiving a proposed change which meets the requirements of 13(A)(1).
- (4) Should the MDNR disapprove the proposed change, the disapproval must describe the specific reasons for the decision and must be forwarded to the Company.

B. Control Program Revision

- (1) The Company may revise the Control Programs provided both of the following conditions are met:
  - (a) The Company demonstrates\*, in writing, that the proposed revision does not result in an increase in the level of fugitive dust or particulate emissions and submits the demonstration to the MDNR for approval.
  - (b) The revision is approved.
- (2) The MDNR shall approve or disapprove the proposed revision, in writing, within 45 days from receiving a proposed revision using an applicable U.S.EPA approved method to demonstrate the proposed revision meets the requirements of 13(B)(1).
- (3) Should the MDNR disapprove the proposed revision, the disapproval must describe the specific reasons for the decision and must be forwarded to the Company.

C. U.S.EPA Notification

Upon approval of a change pursuant to subsection A above, or a substitution of a control measure pursuant to subsection B above, MDNR shall notify U.S.EPA, in writing, of the revised provisions which are enforceable for the facility.

D. Minor Modification

Upon adoption by the MDNR, and upon approval by U.S.EPA, of operating permit rules to implement the Permit Modification provisions recited at 40 CFR 70.7 (e), the Company may modify a fugitive dust or particulate emission source referred to in this Consent Order according to the terms and conditions contained in the operating permit rules.

E. Minor Modification Approval

Upon MDNR approval of a minor modification pursuant to subsection D above, the MDNR shall submit the approved minor modification to U.S.EPA as a proposed revision to the Michigan SIP.

F. Other Applicable Requirements

Any process change, control program revision, or minor modification made pursuant to this Paragraph does not affect the company's obligation to obtain a permit to install or operate required by Federal law or regulation, or contained in Part 2 of the Air Pollution Control ("APC") Rules and any other applicable requirement contained in the APC Rules or Act 348.

- \* - Demonstrations made pursuant to 13(B)(1)(a) involving chemical dust suppressant applications on unpaved roads shall be made using only petroleum resins, asphalt emulsions, or acrylic cements unless otherwise explicitly provided for by the applicable U.S.EPA approved SIP or U.S.EPA approved method.

14. This abatement program is not a variance subject to the 12 month limitation specified in Section 22 of the Air Pollution Act, being MCLA 336.32.

15. The provisions of this Consent Order shall be binding on the parties to this action, their officers, servants, employees, and attorneys, and on those persons in active concert or participation with them who receive actual notice of this Consent Order. In the event the City of Wyandotte sells or transfers the Wyandotte Municipal Power Plant, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within 30 calendar days, the City of Wyandotte shall also notify MDNR Staff, in writing of such sale or transfer, the identity and address of any purchaser or transferee, and confirm the fact that notice of this Consent Order has been given to the purchaser or transferee. The purchaser must provide written agreement, to the Company, to assume the compliance responsibilities of the Consent Order and provide a copy of the agreement to the MDNR Staff.

16. Pursuant to the requirements of Section 5h of Act 348, the public was notified of a 30-day public comment period on this Consent Order which began on March 1, 1993 and a public hearing on this Consent Order which was held on March 30, 1993.

17. Section 16e of Act 348 may serve as a source of authority but not a limitation under which this Consent Order may be enforced. Further, the Michigan

Environmental Protection Act ("MEPA"), 1970 PA 127, MCLA 691.1201 et seq; MSA 14.528(201) et seq; and all other applicable laws may be used to enforce this Consent Order.

I, the undersigned, who is signing this Stipulation and Order for the Utility, certify that I am fully authorized by the Utility to enter into this Consent Order and to execute and legally bind the Utility to it.

Approved as to Form and Content:

Thomas M. Daly

WYANDOTTE MUNICIPAL POWER PLANT

By: Thomas M. Daly

Dated: Sept. 28, 1994

The above signatory subscribed and sworn to before me this 29 day of SEPTEMBER, 1994.

William A. Booker

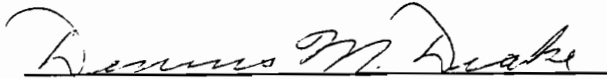
Notary Public

WILLIAM A. BOOKER  
Notary Public, Wayne County, MI  
My Commission Expires July 12, 1995

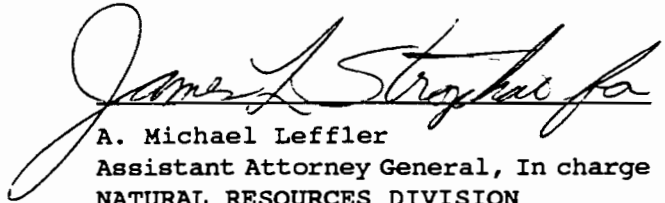


Approved as to Content:

Approved as to Form:



Dennis M. Drake, Acting Chief  
AIR QUALITY DIVISION  
DEPARTMENT OF NATURAL RESOURCES



A. Michael Leffler  
Assistant Attorney General, In charge  
NATURAL RESOURCES DIVISION  
DEPARTMENT OF ATTORNEY GENERAL

Dated: 10/12/94


Dated: 10/11/94

FINAL ORDER

The Chief of the Air Quality Division having had opportunity to review the Consent Order and having been delegated authority to enter into Consent Orders by the Director of the Michigan Department of Natural Resources pursuant to the provisions of the Air Pollution Control Act;

IT IS ORDERED that this Consent Order is approved and shall be entered in the record of the MDNR as a Final Order.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

By:   
Dennis M. Drake, Acting Chief  
Air Quality Division

Dated: 10/12/94

EXHIBIT A  
FUGITIVE DUST CONTROL PLAN  
WYANDOTTE MUNICIPAL ELECTRIC PLANT

1. Facility Name and Address:

Wyandotte Municipal Power Plant  
2555 VanAlstyne  
Wyandotte, Michigan 48192

2. Operator Name and Address:

Mr. ~~Tom Hiebner~~ *RUSS ROBERTS*  
City of Wyandotte  
Department of Municipal Services  
3005 Biddle Avenue  
Wyandotte, Michigan 48192

3. Summary of Source Descriptions and Control Measures

The Wyandotte Municipal Electric Plant consists of three (3) coal-fired boilers, one (1) natural gas-fired boiler, three (X) steam-turbine generators, and ~~a gas-fired combined cycle unit.~~ <sub>4</sub>

4. Attached drawing No. 8605-SSP-001 shows location of storage piles, conveyor loading operations, traffic pattern and location of unloading and transporting operations.

5. Estimate of Fugitive Dust Emissions:

An estimate of fugitive dust emissions has been calculated using AP-42 "Compilation of Air Pollution Emission Factors." The calculations are attached and denoted as Exhibit No. 1. Based on these calculations, fugitive dust emissions from the Wyandotte facility are estimated to be approximately 5.37 tons per year.

It should be noted that some of the Wyandotte site specific parameters fall outside the range of applicability of the equations. Still, the equations of AP-42 are the best source available for making estimates of fugitive dust emissions.

6. Management Practices:

Storage Pile:

The Wyandotte facility has two (2) coal storage piles. One pile is for stoker coal while the other contains run-of-mine coal for use in the pulverized coal-fired boiler. These piles encompass a total area of approximately 2.4 acres.

Control of fugitive dust from the storage piles will be maintained through a combination of compaction and water spraying. Compaction is accomplished using a bulldozer and is performed when coal is originally unloaded. The run-of-mine coal pile is generally the active pile and it is, therefore, compacted on a daily basis. Water spraying of the piles will be performed during the warmer weather

months, April through the first two weeks of November. The application rate will be approximately 0.25 inches of water per square foot of surface area. Frequency of application will depend on weather conditions. However, it is proposed that the pile be sprayed on the fourth consecutive day of no precipitation. During dry and windy conditions, extra precautions and/or water spraying will be performed in order to minimize any fugitive emissions during compacting operations.

Coal Handling:

Coal handling consists of the following processes:

1. Unloading coal from the self unloading barge to the coal pile.
2. Compacting the coal.
3. Moving the coal to the truck hopper.
4. Conveying the coal from the truck hopper to the coal bunkers.

Coal is transported to the Wyandotte facility by barge. The barges are of the self loading type, using a conveyor system to unload the coal. During unloading, fugitive emissions will be minimized by water spraying and by minimizing the height between the coal pile and the conveyor. It is proposed that the distance between the conveyor and coal pile not exceed fifteen (15) feet. Water will be sprayed at a rate of approximately 12 gallons per ton of coal (100 lbs water/ton coal). This will increase the coal's moisture content from approximately 5% to 10% and should significantly decrease fugitive emissions. The spray system will utilize the same pumping station that is used for spraying the coal pile.

Compacting the coal occurs during and immediately after the coal is unloaded. This is a part of routine operation and therefore occurs at no additional cost.

During dry and windy conditions, extra precautions and/or water spraying will be performed in order to minimize any fugitive emissions during both compaction and unloading operations.

Moving of the coal to the truck hopper differs for the two (2) types of coal. The stoker coal must be carried from the pile using a front end loader and dropped into the truck hopper. Minimizing fugitive dust from this operation will be accomplished by minimizing the drop height from the front end loader to the truck hopper. It is proposed that this distance not exceed two (2) feet. The stoker coal is used for boiler No. 5 which is operated on an intermittent basis. Therefore, front end loader operation will also be on an intermittent basis. Some spillage will occur due to front end loader operation. This spillage will be picked up and placed back in the storage pile three (3) times per week. The run-of-mine coal is pushed to the truck hopper using a bulldozer. Water spraying of the pile will assure that the coal has some surface moisture. This will minimize fugitive dust emissions during operations. This combined with the fact that no run-of-mine coal is dropped should result in acceptable levels of fugitive dust.

Transporting of the coal from the truck hopper to the coal bunkers is accomplished by belt conveyors. The conveyors are totally enclosed (360 degrees) in an aluminum sided coal gallery. Once per week, the transfer tower is cleaned resulting in a small discharge of coal from a floor grate. The coal which does fall to the ground is put back on the pile as a part of normal operation.

Roadways:

As shown on the attached drawing, the Wyandotte facility has three (3) types of road surfaces - paved, gravel and dirt.

For reasons of safety, vehicle speeds on these roadways typically do not exceed 10 mph. This slow traffic pattern lends itself to minimizing fugitive dust emissions. However, additional levels of dust control are planned.

It is proposed that fugitive dust from the paved road be minimized by having the roadway cleaned once per week during the period from April 1 to mid-November. Road cleaning will be performed by the Wyandotte Department of Public Works using an Elgin vacuum street sweeper. This vacuum sweeper is of the three (3) wheel water spray and broom variety typically used by municipalities. Cleaning the paved roads should result in no additional cost to the City since the service will be provided by another City department.

Control of fugitive dust from unpaved areas will be performed through the use of a 38% calcium chloride solution. Material safety data sheets for this product are attached and denoted as Exhibit No. 2. For the dirt area, it is proposed to make five (5) applications of calcium chloride during the April to mid-November period. Applications would occur in early April, early June, late July, late August and late September. The liquid would be applied by an application resulting in a coverage of 1 gallon per 20 square feet. The entire dirt area would be covered in each application. This equates to an area of roughly 57,500 square feet. Therefore, each application would require 2,875 gallons. It is proposed that the entire gravel area be sprayed once per year in early June. The center strip of the gravel will be sprayed an additional four (4) times per year at the same time that the unpaved roads are sprayed. The center strip is the area that is used for traffic flow. The side areas are for parking. The center strip area to be sprayed is approximately 3600 square feet. Calcium chloride would be applied at the same rate as the dirt area, one (1) gallon per 20 square feet. Therefore, application to the center strip area will require 180 gallons per application. The entire gravel area is approximately 20,000 square feet in size. The once a year application to this entire area will require 1,000 gallons.

Calcium Chloride Alternative:

An asphalt emulsion applied at the manufacturer's recommended dilution ratio and application rate is an acceptable alternative to calcium chloride applications required for unpaved areas. The frequency for asphalt emulsion application is the same as that required for calcium chloride, given under the heading of "Roadways."

Fly Ash Silo Unloading:

Fly ash from boiler operation is collected using an electrostatic precipitator, baghouse and mechanical collector. The fly ash is pneumatically transported to the storage silo. Fly ash from the silo is unloaded into trucks using a rotary dustless unloader model No. 530 manufactured by United Conveyor Corp. The unloader is equipped with water spray nozzles and a blade assembly and operates such that the water used is limited to that required for dust prevention. The unloader is designed to pass 1440 cubic feet of dry ash per hour

with a water application rate of 60 GPM. Assuming a fly ash density of approximately 60 Lbs/cubic feet. This equates to 500 lbs of water per 1440 lbs of dry fly ash resulting in a wet fly ash having a moisture content of approximately 25.7%. A minimal amount of additional water is sprayed into the ash truck bed upon completion of unloading.

Operation of the unloader is a routine part of operation. For the purposes of fugitive dust control, it is performed at no additional cost to the City.

**Coal Analysis:**

A summary of coal analyses performed as part of a recent stack test are included in Exhibit No. 3. The coal samples were taken downstream of the boiler No. 7 pulverizers.

(Note: See attached DNR required Recordkeeping for Fugitive Dust Sources Addendum for additional information.)

ADDENDUM

RECORDKEEPING FOR FUGITIVE DUST SOURCES

REQUIRED RECORDS

UNPAVED ROADS/LOTS

1. DATE OF TREATMENT
2. CONTROL MEASURE USED
3. RESPONSIBLE PERSON'S INITIALS
4. NAME OF PRODUCT APPLIED
5. AMOUNT OF SOLUTION/WATER APPLIED
6. DILUTION RATIO
7. ROAD SEGMENT/LOT IDENTIFICATION

PAVED ROADS/LOTS

1. DATE OF TREATMENT
2. CONTROL MEASURE USED
3. RESPONSIBLE PERSON'S INITIALS
4. ROAD SEGMENT/LOT IDENTIFICATION

STORAGE PILES/MATERIAL  
HANDLING

1. DATE OF TREATMENT
2. CONTROL MEASURE USED
3. RESPONSIBLE PERSON'S INITIALS
4. DILUTION RATIO (IF APPLICABLE)
5. AMOUNT OF DUST SUPPRESSANT/WATER  
APPLIED
6. IDENTIFICATION OF PILE/MATERIAL  
HANDLING OPERATION TREATED
7. EQUIPMENT USED

OPTIONAL RECORDS

WEATHER CONDITIONS

1. PRECIPITATION
2. TEMPERATURE
3. WIND DIRECTION AND VELOCITY