

M2369
MANILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

M236943836

FACILITY: CUMMINGS MOORE GRAPHITE CO		SRN / ID: M2369
LOCATION: 1646 GREEN N, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Kenneth Newton , Plant Manager		ACTIVITY DATE: 02/15/2018
STAFF: Terseer Hemben	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: PM		
RESOLVED COMPLAINTS:		

CUMMINGS-MOORE GRAPHITE Company (CMGC)
A Division of Asbury Carbons
1646 N. Green Street, Detroit, MI 48209

SRN: M2369; SIC 3295; Source Class: Minor

Date: 2/15/2018.

Contact phone: 313-841-1615; Fax: 313-841-4880

Personnel Present: Mr. Terseer Hemben AQD

Mr. Kenneth Newton CMGC Plant Manager

Permits: Wayne County Permits # C-2949, C-7199 through C-7201, C-10653 & C-10654 conditions; PTI Permit No. 51-06 enforcing regulatory rules-. Federal Rule – 40 CFR 52.21; State Rule 201, Rule 278 through Rule 290 considered; Rule 901, Rule 910, Section 5510 of Act 451, PA 1994, Rule 219, Rule 912, Rule 301, Rule 370, Rule 2001

BACKGROUND:

The Cumming-Moore Graphite Company was founded in 1916 by Messrs John Cummings and William Moore. The company's main business is screening and pulverizing Mexican graphite. The company grinds graphite to particle sizes from 50 minus 100 meshes, on the coarse side, to 99.5 minus 325 meshes (40 Micron) and any fraction in between. The ball and hammer mills, vibroscreens and associated transfer equipment used in the process are not exempt from Rule 201(1) or qualified for exempt status from permitting pursuant to Michigan Rules 278 through 290. The company located the equipment in a building with no direct openings to the outside except the allowance for entrance and exit doors. The company is a minor source.

PROCESS DESCRIPTION AND CONTROLS:

The CMGC receives graphite ore by rail car and ships out the products via truck transportation. The raw ore is stored in two (2) silos that utilize a baghouse for dust control. The ore is pulverized by two (2) roller mills that vent to the internal (fabric collector) baghouse. Pulverized ore is stored in bulk bins. Trucks load the products from the bins for shipment. The bulk loading bins have a baghouse that is vented internally. Additionally, various screening and raw material handling operations on the facility utilize baghouse collectors for dust emission control.

The facility receives bulk crushed graphite by rail and packages the product for market distribution. The process equipment, such as the Ball Mills, grind the pre-crushed ore and feeds to various size screens whereby grains are separated into 4 – 5 grain sizes.

The CMGC plant maintenance consists of weekly inspections of the 3 baghouses, conveyors, elevator housing for signs of wear, and general equipment tear and leak. Controls are built in the process in which emissions are specified by the manufacturers. The enclosed building eliminates fugitive dust occurrence. Particulate dust falls inside the plant and are recycled for sale. The floors, roofs and ceilings are covered with black soot. The walls and roof are occasionally scraped for recovery of soot/particulate for recycling. The vacuum/dust collectors associated with the ball mills and hammer mill are equipped with fabric socks on air exchange areas within the units. The overview of the plant including equipment inventory is on file. There are no vents or direct openings into the production area from the outside.

Inspection Narrative:

I arrived at the facility address on February 15, 2018 at 1025 hours. The purpose of visit was to conduct

compliance inspections relating to the company's graphite processing operation. Temperature at the hour was 46 F with wind speed 13 mph coming from the SW, and humidity 89%. I was welcomed at the office by Mr. Kenneth Newton. We went through the pre-inspection conference. Mr. Newton informed there had not been any equipment modification at the facility. We toured the facility and observed the operation and organization of the workshop floor for evidence of compliance with fugitive dust control.

I inspected the Pit Loading Car Hopper, Ball Mills, screening systems, vibroscreen, baghouses, the roof/skylights and doors to exits. I inspected the neighboring properties outside the facility operational limits for signs of fugitive dust fallouts. Mr. Newton and I concurred there were no fallout particulates on the neighboring properties beyond the facility's operational property boundaries. We returned to the Company's office for a post-inspection conference. I informed the manager that AQD did not find fugitive dust violations at the facility premises, especially on the pavement and walkways. The company kept records in file cabinets at the site. The facility kept most records manually. CMGC requested time extension for providing emission records in an organized format covering the last 12 months. I left the area at 1240 hours.

PERMIT CONDITIONS

The CMGC operation is regulated under five (5) sets of permits with conditions: Wayne County (WC) Permits #C-7199 through C-7201 approved in 1987 cover the fabric filter collectors and Ball Mill #1. The WC set of Permits #C-10653 and #C-10654 were approved in 1995, and they cover the installation of vibroscreen and baghouse dust collector. The AQD Permit (PTI) No. 51-06 covers the Ball Mill #2 operation. The PTI No. 213-15 covers Ball Mills #3, #4, #5 and associated transfer equipment. The PTI No. 93-16 covers Ball Mill #6, Hammer Mill, and associated transfer equipment. Details of the permits are on AQD file. Staff will validate the presence and functional conditions of these equipment at the facility in the next inspection.

OUTSTANDING CONSENT ORDERS:

The State of Michigan issued a SIP consent order No. 7- 1993 for the control of particulate matter. The consent order required improvement in fugitive dust control plan (information on file). The plan was submitted and implemented accordingly.

HISTORY OF VIOLATIONS:

There are no recent violations associated with the CMGC operations.

COMPLIANCE DETERMINATION

Compliance determination followed the following Rules and Permits special conditions (SC):

1. Rule 201(1): The Wayne County permits listed in report satisfied the requirements of Rule 201(1). CMGC did not make any modification to any system, and/ or process at the above referenced facility since installation of the Hammer Mill unit and associated transfer equipment.
WC C-10653 & C-10654
2. SC. 17: CMGC maintained the baghouses on air exchange areas to assure the particulate matter emissions from the screen and vibroscreen controlled by the baghouse dust collector did not exceed 0.006 grains per dry standard cubic foot of exhaust air; 0.015 pounds per hour nor 0.11 tons per year. Maintenance records covering the last 12 months confirm compliance from the baghouses located in a completely enclosed facility [Attachments pg. 23 -129].
3. SC. 18: CMGC properly installed and operated the vibroscreens and baghouse dust collector as required. Maintenance records covering the last 12 months confirm compliance [Attachments pg. 8-129].
4. SC. 19: CMGC operated the screen and vibroscreen (Rotex #1) for 101 hours in calendar year 2017, less than 1,500 hours per year. Attachment pg. 2 confirms compliance.
5. SC. 20: CMGC demonstrated the disposal of collected air contaminants from baghouse dust collector was performed in a manner which prevented the introduction of air contaminants to the outdoor air. The contaminants collected in the baghouse were recycled to the customers as product.
6. SC. 21: CMGC discharged the exhaust air from the baghouse dust collector inside the

manufacturing area of the facility. Visual inspection confirmed compliance with baghouse air discharge mode.

7. SC. 22: Staff observed there was no visible emissions from CMGC facility to the ambient from the equipment that exceeded 0% opacity at the time of this inspection.
8. SC. 23: CMGC did not verify particulate matter emission rates from the screen and vibroscreen by testing at owner's expense in accordance with the Division requirements when requested. Testing was not requested by the AQD.

Wayne County Permits C-7199 through C-7201 and C-4730 Covering Fabric Filter Collectors and Ball mill #1

9. SC. 16: CMGC maintained particulate emissions from the hopper car unloading system did not exceed 0.15 pounds per 1000 pounds of exhaust gas, 0.14 pounds per hour nor 0.61 tons per year. The baghouse maintenance supporting the compliance limits in air exchange areas of Hopper assured compliance. The baghouses were regularly maintained accordingly (Attachment pgs. 23-129).
10. SC. 17: CMGC maintained particulate emissions from the Ball Mill and screening system did not exceed 0.15 pounds per 1000 pounds of exhaust gas; 0.10 pounds per hour nor 0.45 tons per year. The baghouse maintenance in the air exchanging areas of the Ball Mill and screening system were regularly maintained. The dust collectors and associated transfer equipment were inspected and replaced or repaired regularly as shown in records (Attachment pgs. 23-129).
11. SC. 18: CMGC maintained the particulate emissions from the Pit Loading operation did not exceed 0.15 pounds per 1000 pounds of exhaust gas; 0.237 pounds per hour nor 1.04 tons per year. The baghouse maintenance in the air exchanging areas of the Pit Loading operation were regularly maintained. The dust collectors and associated transfer equipment were inspected and replaced or repaired regularly as shown in records (Attachment pgs. 23-129).
12. SC. 19: CMGC ensured the particulate emissions from the bagging operation, covered by WC Permit No. C- 4730 (Kason unit used in a low production area, and attached to a bag packer) did not exceed 0.1 pounds per hour nor 0.04 tons per year. The operator installed dust collectors and baghouses in the air exchange areas. The facility built a complete wall and roof enclosure around the equipment. The baghouses were regularly inspected and replaced accordingly (Attachment pgs. 23-129).
13. SC. 20: There was no visible emission from above systems and operation during the inspection.

Permit No. 51-06: Covering BALL MILL #2 Operation.

14. SC. 1.1: The EU-BALLMILL installed at the CMGC facility processed only inert carbon-based materials. MSDS of materials used for processing showed the facility processed synthetic graphite 99% + carbon (Attachment pgs. 11-17).
15. SC. 1.2: CMGC did not load and unload EU-BALLMILL unless the fabric socks on the evacuation hose vacuum were installed, maintained, and operated in a satisfactory manner. Records submitted by CMGC showed regular maintenance and replacement of fabric socks (Attachment pgs. 24-128).
16. SC. 1.3: CMGC loaded, unloaded, and operated EU-BALLMILL in a totally enclosed space with all access doors closed. Staff visually observed the entire facility was enclosed in a brick wall to the roof building.
17. SC. 1.4: CMGC submitted a sample of all required calculations made regarding monthly operations material used per month for examination by the 15th of the following month. Records covering the last 12 months confirm compliance (Attachment pgs. 1 -2).
18. SC. 1.5: CMGC kept a log of replacement of the fabric socks for EU-BALLMILL in a satisfactory manner. Records of log are attached (Attachment pgs. 5, 23-129).
19. SC. 1.6: CMGC kept records of monthly and previous 12-month rolling time period of the type and pounds of carbon-based material processed in EU-BALLMILL in a satisfactory manner (Attachment pgs. 1-2 exemplify).
20. SC. 1.7: Staff verified that all exhaust gases from the EU-BALLMILL were not discharged to ambient air at any time through visual inspection of the CMGC operations.

Permit No. 213-15 Covering FGBALLMILL #3, #4 & #5 and associated transfer equipment used to process synthetic graphite, with a nominal capacity of 55-66 pounds of graphite per hour.

21. SC. II.1: Staff verified CMGC processed only synthetic graphite in FGBALLMILLS #3-#5.

- MSDS submitted by the permittee confirmed the log of materials processed at the site (Attachment pgs. 11-17).
22. SC. III.1: CMGC did not load or unload any ball mill in FGBALLMILLS #3-#5 unless the fabric socks on the associated evacuation hose vacuum was installed, maintained, and operated in a satisfactory manner. Records submitted by CMGC confirmed installation, maintenance and replacement of socks on the dust collectors (Attachment pgs. 23-129).
 23. SC. III.2: CMGC did not load, unload, or operate any ball mill in FGBALLMILLS #3-#5 unless all associated access doors were closed. Staff observed all doors leading into the building housing the facility's process equipment were closed while operations were in progress.
 24. SC. III.3: CMGC did not load, unload, or operate any ball mill in FGBALLMILLS #3-#5 unless the approved malfunction abatement plan was implemented and maintained. Records submitted by CMGC showed notes of corrections and repairs as part of the malfunction abatement plan (Attachment pgs. 23-129).
 25. SC. VI.1: CMGC completed all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records are attached (Attachment pg. 2).
 26. SC. VI.2: CMGC demonstrated the permittee maintained a current listing from the manufacturer of the chemical composition of each material processed in FGBALLMILLS #3-#5, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee kept all records on file at the facility and made them available to the Department upon request. MSDS is attached (Attachment pgs. 11-17).
 27. SC. VI.3: CMGC kept, in a satisfactory manner, a log of fabric sock replacement for each ball mill in FGBALLMILLS #3-#5. The permittee kept all records on file at the facility and made them available to the Department upon request. Corresponding records are attached (Attachment pgs. 23-129).
 28. SC. VI.4: CMGC kept, in a satisfactory manner, a log of the monthly amount of material processed in FGBALLMILLS #3-#5. The permittee kept all records on file at the facility and made them available to the Department upon request. Records submitted by CMGC confirmed the format of log kept on materials processed in the equipment (Attachment pg. 2).
 29. SC. VIII.1: CMGC demonstrated the exhaust gases from the equipment in FGBALLMILLS #3-#5 were not discharged to the ambient air at any time. Staff visually confirmed the exhaust gases were discharged inside the manufacturing area.

Permit# 93-16: Covering EUBALLMILL#6 Ball mill and associated transfer equipment used to process synthetic graphite with a maximum batch capacity of 2,000 lbs. Evacuation of the mill is controlled by cyclone and fabric filter which is exhausted indoors. A bag house also is used to clean the internal air of the building.

30. SC. II.1: CMGC demonstrated the permittee processed only synthetic graphite in EUBALLMILL#6. The MSDS is attached (Attachment pgs. 11-17).
31. SC. III.1: CMGC did not load or unload EUBALLMILL#6 unless the fabric socks on the associated evacuation hose vacuum were installed, maintained, and operated in a satisfactory manner. Records of maintenance submitted by CMGC confirmed compliance (Attachment pgs. 23-129).
32. SC. III.2: CMGC did not load, unload, or operate EUBALLMILL#6 unless all associated access doors were closed. Staff visually confirmed the associated closed doors into the enclosed facility were not open during the process operation.
33. SC. III.3: CMGC did not operate EUBALLMILL#6 unless a malfunction abatement plan (MAP) as described in Rule 911 (2) had been submitted within 90 days of permit issuance and was implemented and maintained. If at any time the MAP failed to address or inadequately addresses an event that met the characteristics of a malfunction, the permittee amended the MAP within 45 days after such an event occurred. The permittee also amended the MAP within 45 days, if new equipment was installed or upon request from the District Supervisor. The permittee submitted the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD did not notify the permittee within 90 days of submittal, the MAP or amended MAP should be considered approved. Until an amended plan was approved, the permittee implemented corrective procedures or operational changes to achieve compliance with all applicable emission limits. Previous records submitted by the CMGC during application for PTI in resolve of the violation issued by AQD in 2006 included a refined process description with SOP that indicated an updated MAP section. The document

- was submitted by a consultant Bureau Veritas. Technical review notes relating to the AQD permit issued to CMGC following the new Permit # 93-16 indicated the MAP requirements were covered in permit conditions. Since the company encapsulated the total plant battery limits in a building, the new permit did not require the facility to submit a separate MAP as worded in previous permits [Transcripts attached].
34. SC. VI.1: CMGC completed all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. The format is presented in the attached document.
 35. SC. VI.2: CMGC maintained a current listing from the manufacturer of the chemical composition for each material processed in EUBALLMILL#6, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AOD District Supervisor. The permittee kept all records on file at the facility and made them available to the Department upon request. The facility operations met compliance. The listing is presented in MSDS (Attachment pgs. 11-17).
 36. SC. VI.3: CMGC kept, in a satisfactory manner, a log of fabric sock replacement for EUBALLMILL#6. The permittee kept all records on file at the facility and made them available to the Department upon request. The facility met compliance. The log is presented in the attachment (Attachment pgs. 17-129).
 37. SC. VIII.1: Staff visually verified the exhaust gases from the equipment in EUBALLMILL#6 were not discharged to the ambient air at any time. CMGC's equipment discharged the exhaust gases inside the manufacturing area.

EUHAMMERMILL: Hammer mill and associated transfer equipment used to process synthetic graphite with a maximum capacity of 75 lb./hr. based on maximum hopper feed rate. There is no collection of emissions directly from EUHAMMERMILL. A baghouse is used to clean the internal air of the building.

38. SC. I.1: There was no visible emission from vents, doorways, windows, or any other building openings at the facility at the time of inspection.
39. SC. II.1: CMGC processed only synthetic graphite in EUHAMMERMILL.1. MSDS submitted by the facility confirmed compliance (Attachment pgs. 11-17).
40. SC. VI.1: CMGC completed all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Sample of records and formats required are attached.
41. SC. VI.2: CMGC maintained a current listing from the manufacturer of the chemical composition of each material processed in EUHAMMERMILL, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee kept all records on file at the facility and made them available to the Department upon request. The record listing is presented in the MSDS (Attachment pgs. 11-17).
42. SC. VI.3: CMGC kept, in a satisfactory manner, a log of the monthly amount of material processed in EUHAMMERMILL. The permittee kept all records on file at the facility and made them available to the Department upon request. The log is attached (Attachment pg. 2).
43. SC. VIII.1: Staff visually verified the exhaust gases from the equipment in EUHAMMERMILL were not discharged to the ambient air at any time. The exhaust air was discharged inside the manufacturing area.

REGULATORY DISCUSSION

Permits #213-15 and # 93-16 have no emission limits because the potential to emit from the mills were calculated during the permitting process and observed to be very low (approx. 0.01 tpy each) with proper process operation. CMGC enforces conditions to ensure fabric sock filters are properly and regularly maintained during operations as presented in maintenance records. Restrictions limit discharge of exhaust gases indoors only with all doors into the building closed at all times of operations. The indoor air is filtered using baghouse and discharged inside. Hence the integrity of the emission limits is maintained.

Rule 224 and Rule 225 – CMGC complied with these rules because the only emission from the ball and hammer is synthetic graphite processed in the form of particulates. Synthetic graphite is exempt from the definition of TAC pursuant to Rule 120(1)(f)(xix)

NSPS and NESHAP regulations-the rules do not apply to this process because no emission units in the process are subject to the regulatory conditions.

Rule 301- the rule stipulates no visible emissions from vents, doorways, windows or any other building openings at the facility allowed. Since both the ball mill and hammer mill are exhausted indoors, the restriction applies to the entire operation to maintain compliance.

Rule 702-VOC emissions do not apply. The ball and hammer do not emit VOCs, so the rule does not apply.

FURTHER VERIFICATION OF RECORDS

Staff requested the Company manager to verify the status of the following:

- (a) Status of WC-2949
- (b) Status of WC-4177
- (c) Permit status of Roller Mills.

The facility manager requested time to review the equipment regulatory records that are stored in their central office. Findings would be related to AQD.

COMPLIANCE DETERMINATION

The Cummings-Moore facility's operation was inspected. The facility was operated and maintained in a satisfactory manner. Records requested from the CMGC were tendered to DEQ-AQD timely. DEQ-AQD determined the CGMC operated in compliance with the Wayne County permits and PTI permit conditions. The facility pledged to update the regulatory status of active permits for equipment operated on the premises. Staff will follow up on the pledge in the next scheduled compliance inspection.

NAME

th

DATE

1/10/2019

SUPERVISOR

JK