



ENGINEERING AND COMPLIANCE

APPLICATION PROCESSING AND CALCULATIONS

APPL. NO.

493528 & -31

DATE:

10/07/09

PROCESSED BY

S. JIANG

CHECKED BY

D. GORDON

EVALUATION REPORT FOR PERMIT TO CONSTRUCT/OPERATE

Applicant's Name: CAMBRO MANUFACTURING COMPANY Facility ID: 8309

Mailing Address: P.O. BOX 2000
HUNTINGTON BEACH, CALIFORNIA 92647-2000

Equipment Location: 7601 CLAY AVENUE
HUNTINGTON BEACH, CALIFORNIA 92648

Appl. No. 493528 – Modification of the grinding system (P/O F59687), by:

The addition of:

- A shredder, Weima America, model WLK6S
- A granulator, Cumberland Engineering, model 1620X

And the removal of:

- Grinder, Ball & Jewell, model CGMB-2030

PRE-MODIFICATION EQUIPMENT DESCRIPTION

PLASTIC GRINDER, BALL & JEWELL, MODEL CGMB-2030, WITH A 50 HP MOTOR, A PNEUMATIC CONVEYOR CONSISTING OF A 5 HP EVACUATION BLOWER, A CYCLONE, STERLING, MODEL CS08014, EQUIPPED WITH FOUR BAG FILTERS, 1'-4" DIA. X 10'-0" L. EACH, AND A DEDUSTER, PELLETRON, MODEL P30.

POST-MODIFICATION EQUIPMENT DESCRIPTION

PLASTIC GRINDING SYSTEM CONSISTING OF:

1. SHREDDER, WEIMA AMERICA, MODEL NO. WLK6S, WITH A 50 HP MOTOR.
2. GRANULATOR, CUMBERLAND ENGINEERING, MODEL NO. 1620X, WITH A 40 HP MOTOR.
3. PNEUMATIC CONVEYOR CONSISTING OF A 5 HP EVACUATION BLOWER.
4. CYCLONE SEPERATOR, STERLING, MODEL CS08014.
5. FILTER VENT, WITH FOUR BAG FILTERS, EACH 1'-4" DIA. X 10'-0" L.
6. DE-DUSTER, PELLETRON, MODEL P30.
7. CYCLONE SEPERATOR, PELLETRON.
8. FILTER VENT, WITH ONE FILTER CARTRIDGE, 1'-0" DIA. X 1'-4"L.

Appl. No. 493531 – Minor Title V Facility Permit Revision

REVISION OF TITLE V FACILITY PERMIT PER RULE 301(1)(7).



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PERMIT CONDITIONS

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- 3) THE TOTAL AMOUNT OF MATERIALS PROCESSED BY THIS EQUIPMENT SHALL NOT EXCEED 12,800 POUNDS IN ANY ONE DAY.
[RULE 1303(b)-OFFSET]
- 3) THE TOTAL AMOUNT OF MATERIALS PROCESSED BY THIS EQUIPMENT SHALL NOT EXCEED 345,600 POUNDS PER CALENDAR MONTH.
[RULE 1303(b)-OFFSET]
- 4) DUST COLLECTED IN THE FILTER SOCKS SHALL BE DISCHARGED ONLY INTO ENCLOSED CONTAINERS OR RETURNED TO PROCESS AND SHALL NOT BE HANDLED IN A MANNER THAT MAY RESULT IN THE RE-RELEASE OF COLLECTED MATERIALS TO THE ATMOSPHERE.
[RULE 1303(a)(1)-BACT]
- 5) THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY COMPLIANCE WITH CONDITION NO. 3 ABOVE. SUCH RECORDS SHALL BE KEPT ON THE PREMISES FOR AT LEAST TWO YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[RULE 3004(a)(4)]

Periodic Monitoring:

- 6) THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE-HOUR, THE OPERATOR SHALL EITHER:



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- A. VERIFY AND CERTIFY WITHIN 24 HOURS THAT THE EQUIPMENT CAUSING THE EMISSION AND ANY ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT ARE OPERATING NORMALLY ACCORDING TO THEIR DESIGN AND STANDARD PROCEDURES AND UNDER THE SAME CONDITIONS UNDER WHICH COMPLIANCE WAS ACHIEVED IN THE PAST;
- B. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT; OR
- C. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATION TO AQMD.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A) STACK OR EMISSION POINT IDENTIFICATION;
- B) DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- C) DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- D) VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.

[RULE 3004(a)(4)]

Emissions And Requirements:

- 7) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: RULE 405, SEE APPENDIX B FOR EMISSION LIMITS

BACKGROUND/HISTORY

Cambro Manufacturing Co (Cambro) manufactures plastic products for the commercial food services industry. Cambro operates two facilities in Huntington Beach. Facility with an ID of 8309 is located at 7601 Clay Avenue, which is engaged in the compression molding and injection molding processes. The other facility (ID: 119021) is located at 5801 Skylab Road, which is engaged in the rotational molding and injection molding processes. Cambro Clay Avenue facility is a Title V facility but not RECLAIM. Cambro Skylab Road facility is a Non Title V and Non RECLAIM facility.



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The initial Title V Permit for Cambro Clay Avenue facility was issued on July 3, 2002 and expired on July 2, 2007. A Title V Permit Renewal application was submitted on April 25, 2007, and the proposed renewal permit will be submitted to EPA for review simultaneously with the subject applications.

On December 2, 2008, Cambro submitted the following applications:

<u>A/N</u>	<u>Type</u>	<u>Previous Permit No.</u>	<u>Equipment</u>
493528	PC/Modification	F59687	Plastic Grinder
493531	Plan	N/A	Minor Title V Permit Revision

Appl. No. 493528 was submitted for a modification of the plastic grinder by installing a shredder as a pre-cutter, and to replace the existing plastic grinder.

Appl. No. 493531 was submitted as a plan for the minor revision of the Title V permit as specified in Rule 301.

PROCESS DESCRIPTION

Reject plastic products are placed on a belt conveyor leading to the top of the shredder. The shredder breaks down the reject plastic products into pieces that can be admitted to the granulator. The plastic pieces from the shredder fall onto another belt conveyor leading to the top of the granulator. The granulator grinds the plastic pieces into granules size ranging from 2 to 5 mm.

The plastic granules are pneumatically conveyed to a cyclone receiver where air is vent through the filter socks and the coarse granules are collected into a de-duster. The de-duster is equipped with an integral cyclonic dust collector/filter. This de-duster uses a magnetic field and an air wash to remove fine particles from the main stream of plastic granules. This unit has its own 1.5 HP blower to provide air flow to the air wash and venture system to separate the coarse particles from the fine particles. The coarse granules fall by gravity to totally enclosed hopper. The fine particles are conveyed by air to an integral cyclonic dust collector/filter, where the fines are captured. The cyclone traps particulates using inertial force. The larger particles fall into a dust container. The finer particles are trapped in a pleated fabric filter element.

EMISSION SOURCES

Only PM10 emissions are expected from this process.

This facility operates 24 hrs/day, 6 days/wk, and 52 wks/yr.

EMISSION CALCULATIONS

The addition of a pre-cutter (shredder) and the replacement of the grinder will not change the size of the granules produced. In addition, the material throughput and all other operating conditions are not changed. **Therefore, no emission change is expected.**



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Operating Schedule: 24 hr/day, 6 days/wk, 52 wks/yr
Throughput (Max.): 345,600 lb/month

Assumption:

Emission factor: 2 lb PM/ton material processed (default)
PM10 = 50% PM
Filter sock control efficiency = 99%

Total PM Emissions:

$R1=R2 = (345,600 \text{ lb/month}) (1 \text{ lb}/1,000 \text{ lb}) (1 - 99\%) / (27 \text{ days/month}) / (24 \text{ hr/day}) = 0.0053 \text{ lb/hr}$
30-day ave. = $(345,600 \text{ lb/month}) (1 \text{ lb}/1,000 \text{ lb}) (1 - 99\%) / (30 \text{ days/month}) = 0.115 \text{ lb/day}$

Total PM10 Emissions:

$R1=R2 = (0.0053 \text{ lb/hr}) (50\%) = 0.0027 \text{ lb/hr}$
30-day ave. = $(0.115 \text{ lb/day}) (50\%) = 0.058 \text{ lb/day}$

RULE 404 CALCULATIONS:

PM concentration = $(0.0053 \text{ lb/hr}) (7,000 \text{ grains/lb}) / (60 \text{ min/hr}) / (5,000 \text{ ft}^3/\text{min}) = 0.00012 \text{ grains/ft}^3$

RULES AND REGULATIONS EVALUATION

Rule 212: **Standards for Approving Permits** – The facility is not located within 1,000 feet of a K-12 school, and there is no emission increase with this modification. A Public Notice is not required.

Rule 402: **Public Nuisance** – The facility is located in a commercial/industrial area. The potential for public nuisance is minimal.

Rule 404: **Particulate Matter Concentration** - Table 404(a) allows a maximum concentration of PM 0.102 grains/ft³ for a discharging rate of 5,000 CFM. The PM concentration in the exhaust air is estimated at 0.00012 grains/ft³. Therefore, compliance is expected.

Rule 405: **Solid Particulate Matter – Weight**

Process weight = 12,800 lb/day, or 533 lb/hr

Table 405(a) allows a maximum 1.73 lbs/hr for a process weight of 533 lbs/hr. The calculated emission rate of 0.0053 lbs/hr for this equipment is within Rule 405 limits. Compliance is expected.

REG XIII: **New Source Review** - There are no emission increase associated with proposed modification project. No emission offset is required for this project.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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Reg XXX: Title V Permit

Cambro Manufacturing Co (Facility ID: 008309) has an active Title V permit. The initial Title V Permit for Cambro Clay Avenue facility was issued on July 3, 2002 and expired on July 2, 2007. A Title V Permit Renewal application was submitted on April 25, 2007, and the proposed renewal permit will be submitted to EPA for review simultaneously with the subject applications.

Based on the above evaluation, no emission increase is expected for this modification project. Therefore, application Nos. 493528 is considered a Minor Permit Revisions of Title V Facility Permit and it is subject to a 45-day EPA review prior to final revision of the Title V Facility Permit (Application No. 493531).

CONCLUSION AND RECOMMENDATIONS

Based on this evaluation, it is expected that the subject equipment will be operated in compliance with all applicable District Rules and Regulations. The Permit to Construct/Operate is recommended to be issued.