**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY**
**AIR QUALITY DIVISION**

October 16, 2015

**PERMIT TO INSTALL**
156-13A

**ISSUED TO**
Sun Chemical

**LOCATED AT**
4925 Evanston Avenue
Muskegon, Michigan

**IN THE COUNTY OF**
Muskegon

**STATE REGISTRATION NUMBER**
B5966

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

| | |
|---|---|
| DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:<br>**October 6, 2015** | |
| DATE PERMIT TO INSTALL APPROVED:<br>**October 16, 2015** | SIGNATURE: |
| DATE PERMIT VOIDED: | SIGNATURE: |
| DATE PERMIT REVOKED: | SIGNATURE: |

# PERMIT TO INSTALL

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## Common Abbreviations / Acronyms

| Common Acronyms | | Pollutant / Measurement Abbreviations | |
|---|---|---|---|
| AQD | Air Quality Division | BTU | British Thermal Unit |
| BACT | Best Available Control Technology | °C | Degrees Celsius |
| CAA | Clean Air Act | CO | Carbon Monoxide |
| CEM | Continuous Emission Monitoring | dscf | Dry standard cubic foot |
| CFR | Code of Federal Regulations | dscm | Dry standard cubic meter |
| $CO_2e$ | Carbon Dioxide Equivalent | °F | Degrees Fahrenheit |
| COM | Continuous Opacity Monitoring | gr | Grains |
| EPA | Environmental Protection Agency | Hg | Mercury |
| EU | Emission Unit | hr | Hour |
| FG | Flexible Group | $H_2S$ | Hydrogen Sulfide |
| GACS | Gallon of Applied Coating Solids | hp | Horsepower |
| GC | General Condition | lb | Pound |
| GHGs | Greenhouse Gases | kW | Kilowatt |
| HAP | Hazardous Air Pollutant | m | Meter |
| HVLP | High Volume Low Pressure * | mg | Milligram |
| ID | Identification | mm | Millimeter |
| LAER | Lowest Achievable Emission Rate | MM | Million |
| MACT | Maximum Achievable Control Technology | MW | Megawatts |
| MAERS | Michigan Air Emissions Reporting System | ng | Nanogram |
| MAP | Malfunction Abatement Plan | $NO_x$ | Oxides of Nitrogen |
| MDEQ | Michigan Department of Environmental Quality (Department) | PM | Particulate Matter |
| MSDS | Material Safety Data Sheet | PM10 | PM with aerodynamic diameter ≤10 microns |
| NESHAP | National Emission Standard for Hazardous Air Pollutants | PM2.5 | PM with aerodynamic diameter ≤ 2.5 microns |
| NSPS | New Source Performance Standards | pph | Pounds per hour |
| NSR | New Source Review | ppm | Parts per million |
| PS | Performance Specification | ppmv | Parts per million by volume |
| PSD | Prevention of Significant Deterioration | ppmw | Parts per million by weight |
| PTE | Permanent Total Enclosure | psia | Pounds per square inch absolute |
| PTI | Permit to Install | psig | Pounds per square inch gauge |
| RACT | Reasonably Available Control Technology | scf | Standard cubic feet |
| ROP | Renewable Operating Permit | sec | Seconds |
| SC | Special Condition | $SO_2$ | Sulfur Dioxide |
| SCR | Selective Catalytic Reduction | THC | Total Hydrocarbons |
| SRN | State Registration Number | tpy | Tons per year |
| TAC | Toxic Air Contaminant | µg | Microgram |
| TEQ | Toxicity Equivalence Quotient | VOC | Volatile Organic Compound |
| VE | Visible Emissions | yr | Year |

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

## SPECIAL CONDITIONS

## EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| Emission Unit ID | Emission Unit Description (Process Equipment & Control Devices) | Flexible Group ID |
|---|---|---|
| EU-Nauta01BL801 | A pigment processing operation consisting of Nauta blender (ID # 01BL801), AC Mill (ID # 01G801), product receiving baghouses (ID # 01BH802, 01BH812), and pack-out baggers (ID # 01U802, 01U812). This operation is equipped with control devices of dust collection baghouse (ID # 01BH801) and filters (ID#'s 01AF802, 01AF812,01AF801). | FG-Blend |
| EU-Nauta02BL811 | A pigment processing operation consisting of Nauta blender (ID # 02BL811), product receiving baghouse (ID # 02BH812), and pack-out bagger (ID # 02U812). This operation is equipped with dust collection baghouse (ID # 02BH811) and filter (ID # 02AF811). | FG-Blend |
| EU-Nauta02BL801 | A pigment processing operation consisting of Nauta blender (ID # 02BL801) and pack-out bagger (ID # 02U801). This operation is equipped with a dust collection baghouse (ID# 02BH801) and filter (ID # 02AF801). | FG-Blend |
| EU-Ribbon01BL811 | A pigment processing operation consisting of ribbon blender (ID # 01BL811), AC Mill (ID # 01G801), product receiving baghouses (ID #'s 01BH802, 01BH812), and pack-out baggers (ID #'s 01U802 and 01U812). This operation is equipped with control devices of dust collection baghouse (ID # 01BH811) and filters (ID #'s 01AF802, 01AF812, 01AF811). | FG-Blend |
| EU-EirichBlender | A rotary blender (ID # 06D633) used in pigment processing. Emissions from pack-out of the blender are controlled by a pack-out baghouse (ID # 06BH634). | NA |
| EU-BeltDryer | A belt dryer (ID # 01D610) used in pigment processing and a product receiving baghouse (ID # 01BH650). The baghouse is equipped with a filter (ID # 01AF650); the belt dryer is equipped with control devices of a separator (ID # 01SE630), water quench (ID # 01S630), and Venturi Scrubber/Cyclone (ID # 01P630). An Acetic Scrubber and a Caustic Scrubber are in place but not in use. | NA |
| EU-SprayDryer | A spray dryer (ID # 02D609) used in pigment processing and two product receiving baghouses (ID # 02BH610N, 02BH610S). The baghouses are equipped with a shared filter (ID # 02AF610). | NA |
| EU-TD06D612 | A tray dryer (ID # 06D612) used in pigment processing, equipped with a filter (ID # 06AF612). | FG-TrayDry |
| EU-TD06D622 | A tray dryer (ID # 06D622) used in pigment processing, equipped with a filter (ID # 06AF622). | FG-TrayDry |
| EU-TD06D632 | A tray dryer (ID # 06D632) used in pigment processing, equipped with a filter (ID # 06AF632). | FG-TrayDry |
| EU-TDPackOut | Pack-out operation for the three tray dryers. Equipped with a baghouse (ID # 06BH634). | FG-TrayDry |
| EU-SpinNorth | North spin flash dryer to dry pigment, with 2.5 MMBTU/hr natural gas-fired direct heater (ID # 06B607). Equipped with a product receiving baghouse (ID # 02BH607) and a filter (ID # 06AF607) as particulate matter emission control. | FG-SpinDry |
| EU-SpinSouth | South spin flash dryer to dry pigment, with 2.5 MMBTU/hr natural gas-fired direct heater (ID # 06B617). Equipped with a product receiving baghouse (ID # 02BH617) and a filter (ID # 02AF617) as particulate matter emission control. | FG-SpinDry |
| Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290. | | |

**The following conditions apply to: EU-EirichBlender**

**DESCRIPTION:** A rotary vacuum blender (ID # 06D633) used in pigment. Emissions from pack-out of the blender are controlled by a pack-out baghouse (ID # 06BH634).

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:**

Baghouse ID #:

06BH634 - air pollution control for pack-out (exhaust in room)

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. PM | 0.01 lbs/1,000 lbs of exhaust gases | Test protocol* | EU-EirichBlender | SC VI.1 | **R 336.1331** |
| [A] Except for uncombined water vapor<br>* Test protocol shall specify averaging time. | | | | | |

## II. MATERIAL LIMITS

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-EirichBlender unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for EU-EirichBlender, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not conduct pack-out operations from EU-EirichBlender unless the pack-out baghouse (ID # 06BH634) is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters within the ranges specified in the MAP. **(R 336.1331, R 336.1910)**

2. The permittee shall equip and maintain the pack-out baghouse (ID # 06BH634) with pressure sensors with audible alarms that sound when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

3. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. **(R 336.1201(3))**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across the pack-out baghouse (ID # 06BH634) as specified in the MAP at the frequency specified in the MAP. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1331, R 336.1910)**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

1. The exhaust gases from the EU-EirichBlender shall not be discharged directly to the ambient air. **(R 336.1301, R 336.1331)**

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-BeltDryer**

**DESCRIPTION:** A belt dryer (ID # 01D610) used in pigment processing and a product receiving baghouse (ID # 01BH650). The baghouse is equipped with a filter (ID # 01AF650); the belt dryer is equipped with control devices of a separator (ID # 01SE630), water quench (ID # 01S630), and Venturi Scrubber/Cyclone (ID # 01P630).

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:**

Baghouse ID #:
01BH650 – air pollution control and product receipt (exhaust in room, post filter)
Absolute Filter ID #:
01AF650
Separator ID #:
01SE630 – (exhaust to Water Quench)
Water Quench ID #:
01S630 – (exhaust to Venturi Scrubber/Cyclone)
Venturi Scrubber/Cyclone ID #:
01P630 – (exhaust to SV-Stack14)
Additional scrubbers physically located in association with this process but not in use (air passes through units but is not scrubbed as no liquid is present):
Caustic scrubber ID # 01S641
Acetic scrubber ID # 01S640

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. Dichlorobenzidine (DCB) | 4.22 µg/m$^{3, 1}$ | Test protocol* | EU-BeltDryer | SC VI.1 | R 336.1225 |
| 2. Dimethoxybenzidine (DMB) | 4.22 µg/m$^{3, 1}$ | Test protocol* | EU-BeltDryer | GC 13 | R 336.1225 |
| * Test protocol shall specify averaging time. | | | | | |

## II. MATERIAL LIMITS

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-BeltDryer unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for EU-BeltDryer, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-BeltDryer unless the following equipment is installed, maintained, and operated in a satisfactory manner:
   a. Separator (ID # 01SE630)
   b. Water quench (ID # 01S630)
   c. Venturi scrubber/cyclone (ID # 01P630)
   d. Baghouse (ID # 06BH650)
   e. Filter (ID # 01AF650)

   Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain the absolute filter (ID # 01AF650) and baghouse (ID # 06BH650) with pressure sensors with audible alarms that sound when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

3. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. Labelling shall be completed within 60 days of permit issuance. **(R 336.1201(3))**

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

N/A

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record the DCB emissions from EU-BeltDryer on a quarterly basis, in a manner and with instrumentation acceptable to the Air Quality Division. The permittee shall perform four consecutive quarterly readings of the DCB emission rates from EU-BeltDryer. After successful completion of the four consecutive quarterly readings, the permittee may request an alternative monitoring schedule. Any request for an alternative monitoring schedule shall be submitted to the AQD District Supervisor for approval. [1] **(R 336.1225)**

2. The permittee shall monitor and record, in a satisfactory manner, the following operating parameters as specified in the malfunction abatement plan (MAP) at the frequency specified in the MAP:
   a. Pressure drop across baghouse (ID # 01BH650)
   b. Pressure drop across absolute filter (ID # 01AF650)
   c. Pressure drop across the venturi scrubber/cyclone (ID # 01P630)
   d. Water flow rate for water quench (ID # 01S630)
   e. Water flow rate for venturi scrubber/cyclone (ID # 01P630)

   The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged to the ambient air:

| Stack & Vent ID | Maximum Exhaust Diameter/Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|---|---|---|---|
| 1. SV-Stack14* | Not restricted | Not restricted | NA |
| * Not required to discharge exhaust gases unobstructed vertically upwards. | | | |

## IX. OTHER REQUIREMENTS

NA

**Footnotes:**
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-SprayDryer**

**DESCRIPTION:** A spray dryer (ID # 02D609) used in pigment processing and two product receiving baghouses (ID #s 02BH610N, 02BH610S). The baghouses are equipped with a shared filter (ID # 02AF610).

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:**

Baghouse ID #s:
02BH610N – air pollution control and product receipt (exhaust to SV-Stack8, post filter)
02BH610S – air pollution control and product receipt (exhaust to SV-Stack8, post filter)

Absolute Filter ID #:
02AF610

## I. EMISSION LIMITS

NA

## II. MATERIAL LIMITS

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-SprayDryer unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for EU-SprayDryer, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-SprayDryer unless the baghouses (ID #s 02BH610N, 02BH610S) and absolute filter (ID # 02AF610) controlling the spray dryer are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain the absolute filter (ID # 02AF610) and baghouses (ID #s 02BH610N, 02BH610S) with pressure sensors with audible alarms that sound when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

3. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. Labelling shall be completed within 60 days of permit issuance. **(R 336.1201(3))**

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record, in a satisfactory manner, the following operating parameters as specified in the malfunction abatement plan (MAP) at the frequency specified in the MAP:
   a. Pressure drop across baghouse (ID # 02BH610N)
   b. Pressure drop across baghouse (ID # 02BH610S)
   c. Pressure drop across the absolute filter (ID # 02AF610)

   The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged to the ambient air:

| Stack & Vent ID | Maximum Exhaust Diameter/Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|---|---|---|---|
| 1. SV-Stack8* | Not restricted | Not restricted | NA |
| * Not required to discharge exhaust gases unobstructed vertically upwards. | | | |

## IX. OTHER REQUIREMENTS

NA

**Footnotes:**

[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

## FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| Flexible Group ID | Flexible Group Description | Associated Emission Unit IDs |
|---|---|---|
| FG-TrayDry | Three tray dryers used in pigment processing, with pack-out operation. | EU-TD06D612, EU-TD06D622, EU-TD06D632, EU-TDPackOut |
| FG-SpinDry | Two spin flash dryers to dry pigment. | EU-SpinNorth, EU-SpinSouth |
| FG-Blend | Four blenders (3 Nauta, 1 Ribbon) and AC Mill used to grind and blend dry pigment, with associated pack-out operations. | EU-NautaNorth, EU-NautaYellow, EU-NautaRed, EU-RibbonSouth |

**The following conditions apply to: FG-TrayDry**

**DESCRIPTION:** Three tray dryers used in pigment processing, with pack-out operation.

**Emission Units:** EU-TD06D612, EU-TD06D622, EU-TD06D632, EU-TDPackOut

**POLLUTION CONTROL EQUIPMENT:**

Baghouse ID #:
- 06BH634 – air pollution control for pack-out (exhaust in room)

Wash Filter ID #s:
- 06WF612
- 06WF622
- 06WF632

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. Dichlorobenzidine (DCB) | 0.05 µg/m$^3$ [A, 1] | Test protocol* | EU-TD06D612, EU-TD06D622, EU-TD06D632 | SC VI.1 | R 336.1225 |
| 2. Dimethoxybenzidine (DMB) | 0.05 µg/m$^3$ [A, 1] | Test protocol* | EU-TD06D612, EU-TD06D622, EU-TD06D632 | GC 13 | R 336.1225 |
| 3. Dichlorobiphenyl | 0.2 µg/m$^3$ [A, 1] | Test protocol* | EU-TD06D612, EU-TD06D622, EU-TD06D632 | GC 13 | R 336.1225 |
| 4. PM | 0.10 lb/1,000 lbs of exhaust gases, calculated on a dry gas basis | Test protocol* | EU-TD06D612, EU-TD06D622, EU-TD06D632 | GC 13 | R 336.1331 |
| 5. Visible Emissions | 0% Opacity [B] | 6-minute average | EU-TD06D612, EU-TD06D622, EU-TD06D632 | SC VI.2 | R 336.1301(1)(c) |

[A] Corrected to 70 degrees F and 29.92 inches Hg
[B] Except for uncombined water vapor
* Test protocol shall specify averaging time.

## II. MATERIAL LIMITS

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-TrayDry unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-TrayDry, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any tray dryer in FG-TrayDry unless the following associated equipment is installed, maintained, and operated in a satisfactory manner:
   a. Wash filter (ID # 06WF612)
   b. Wash filter (ID # 06WF622)
   c. Wash filter (ID # 06WF632)
   d. Pack-out baghouse (ID # 06BH634)

   Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910)**

2. The permittee shall equip and maintain the wash filters (ID #s 06WF612, 06W622, 06WF632) and baghouse (ID # 06BH634) with pressure sensors with audible alarms that sound when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

3. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. Labelling shall be completed within 60 days of permit issuance. **(R 336.1201(3))**

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

N/A

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record the DCB emissions from FG-TrayDry on a quarterly basis, in a manner and with instrumentation acceptable to the Air Quality Division. The permittee shall perform four consecutive quarterly readings of the DCB emission rates from FG-TrayDry. After successful completion of the four consecutive quarterly readings, the permittee may request an alternative monitoring schedule. Any request for an alternative monitoring schedule shall be submitted to the AQD District Supervisor for approval.[1] **(R 336.1225)**

2. The permittee shall monitor and record, in a satisfactory manner, the following operating parameters as specified in the malfunction abatement plan (MAP) at the frequency specified in the MAP:
   a. Pressure drop across wash filter (ID # 06WF612)
   b. Pressure drop across wash filter (ID # 06WF622)
   c. Pressure drop across wash filter (ID # 06WF632)

   The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged to the ambient air:

| Stack & Vent ID | Maximum Exhaust Diameter/Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|---|---|---|---|
| 1. SV-Stack20* | Not Restricted | Not Restricted | NA |
| 2. SV-Stack21* | Not Restricted | Not Restricted | NA |
| 3. SV-Stack23* | Not Restricted | Not Restricted | NA |
| * Not required to discharge exhaust gases unobstructed vertically upwards. | | | |

## IX. OTHER REQUIREMENTS

NA

**Footnotes:**
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-SpinDry**

**DESCRIPTION:** Two spin flash dryers to dry pigment.

**Emission Units:** EU-SpinNorth, EU-SpinSouth

**POLLUTION CONTROL EQUIPMENT:** Each dryer is equipped with an absolute filter for particulate matter emission control.
Baghouse ID #s:
06BH607
06BH617
Absolute Filter ID #s:
06AF607
06AF617

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period/ Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. PM | 0.006 pph | Test Protocol* | Each spin flash dryer in FG-SpinDry | GC 13 | R 336.1331 |
| 2. PM10 | 0.012 pph | Test Protocol* | FG-SpinDry | GC 13 | 40 CFR 52.21(c) & (d) |
| * Test protocol shall specify averaging time | | | | | |

## II. MATERIAL LIMITS

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-SpinDry unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-SpinDry, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any dryer in FG-SpinDry unless the following associated equipment is installed, maintained, and operated in a satisfactory manner:
   a. Absolute filter (ID # 06AF607)
   b. Absolute filter (ID # 06AF617)
   c. Baghouse (ID # 06BH607)
   d. Baghouse (ID # 06BH617)

   Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1225, R 336.1331, R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor the pressure drop across each absolute filter (ID #s 06AF607, 06AF617) on a continuous basis. Each device shall be installed and operated so as to notify an operator of conditions requiring corrective action to ensure satisfactory operation of the absolute filter. **(R 336.1910)**

3. The permittee shall equip and maintain the baghouses (ID #s 06BH607, 06BH617) with pressure sensors with audible alarms that sound when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

4. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. Labelling shall be completed within 60 days of permit issuance. **(R 336.1201(3))**

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record, in a satisfactory manner, the following operating parameters as specified in the malfunction abatement plan (MAP) at the frequency specified in the MAP:
   a. Pressure drop across baghouse (ID # 06BH607)
   b. Pressure drop across baghouse (ID # 06BH617)
   c. Pressure drop across absolute filter (ID # 06AF607)
   d. Pressure drop across absolute filter (ID # 06AF617)

   The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| Stack & Vent ID | Maximum Exhaust Diameter/Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|---|---|---|---|
| 1. SV-Stack32 | 15[1] | 45[1] | R 336.1225 |
| 2. SV-Stack33 | 15[1] | 45[1] | R 336.1225 |

## IX. OTHER REQUIREMENTS

NA

**Footnotes:**
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-Blend**

**DESCRIPTION:** Four blenders (3 Nauta, 1 Ribbon) and AC Mill used to grind and blend dry pigment, with associated pack-out operations.

**Emission Units:** EU-Nauta01BL801, EU-Nauta02BL811, EU-Nauta02BL801, EU-Ribbon01BL811

**POLLUTION CONTROL EQUIPMENT:** Each blender is equipped with a baghouse and filter for particulate matter emission control.

Baghouse ID #s:

01BH801 – air pollution control (exhaust in room, post filter)
01BH811 – air pollution control (exhaust in room, post filter)
01BH802 – air pollution control for pack-out and product receipt (exhaust to SV-Stack 26, post filter)
01BH812 – air pollution control for pack-out and product receipt (exhaust to SV-Stack 25, post filter)
02BH801 – air pollution control and product receipt (exhaust in room, post filter)
02BH811 – air pollution control (exhaust in room, post filter)
02BH812 – air pollution control for pack-out and product receipt (exhaust to SV-Stack25, post filter)

Absolute Filter ID #s:

01AF801
01AF811
01AF802
01AF812
02AF801
02AF811 – shared filter between 02BH811 and 02BH812

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period/ Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. PM | 0.04 lb/1,000 lbs of exhaust gases, calculated on a dry gas basis | Test protocol* | Equipment that exhausts to SV-Stack25 and SV-Stack26 | GC 13 | R 336.1331 |
| * Test protocol shall specify averaging time | | | | | |

## II. MATERIAL LIMITS

N/A

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-Blend unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-Blend, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 45 days of submittal, the amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

## IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the blending and pack-out operations unless the associated baghouses and filters are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1331, R 336.1910)**

2. The permittee shall equip and maintain each absolute filter and baghouse with a pressure sensor with an audible alarm that sounds when the pressure drop is outside the range specified in the MAP. **(R 336.1910)**

3. The permittee shall label all equipment with permanent labels that correspond with the AQD permit and MAP. Labelling shall be completed within 60 days of permit issuance. **(R 336.1201(3))**

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record, in a satisfactory manner, the following operating parameters as specified in the malfunction abatement plan (MAP) at the frequency specified in the MAP:
    a. Pressure drop across baghouse (ID # 01BH801)
    b. Pressure drop across baghouse (ID # 01BH811)
    c. Pressure drop across baghouse (ID # 01BH802)
    d. Pressure drop across baghouse (ID # 01BH812)
    e. Pressure drop across baghouse (ID # 02BH801)
    f. Pressure drop across baghouse (ID # 02BH811)
    g. Pressure drop across baghouse (ID # 02BH812)
    h. Pressure drop across absolute filter (ID # 01AF801)
    i. Pressure drop across absolute filter (ID # 01AF811)
    j. Pressure drop across absolute filter (ID # 01AF802)
    k. Pressure drop across absolute filter (ID # 01AF812)
    l. Pressure drop across absolute filter (ID # 02AF801)
    m. Pressure drop across absolute filter (ID # 02AF811)

    The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| Stack & Vent ID | Maximum Exhaust Diameter/Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|---|---|---|---|
| 1. SV-Stack25 | 8[1] | 50[1] | R 336.1225 |
| 2. SV-Stack26* | Not restricted | Not restricted | NA |
| * Not required to discharge exhaust gases unobstructed vertically upwards. | | | |

## IX. OTHER REQUIREMENTS

NA

**Footnotes:**
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).