

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF THE DIRECTOR

In the matter of administrative proceedings)
against **SUN CHEMICAL CORPORATION,**)
a corporation organized under the laws of the)
State of Michigan and doing business at 4925)
Evanston Avenue, City of Muskegon, County)
of Muskegon, State of Michigan)
)

AQD No. 42-2014

SRN: B5966

STIPULATION FOR ENTRY OF FINAL ORDER
BY CONSENT

This proceeding resulted from allegations by the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) against Sun Chemical Corporation (Company), a Michigan corporation located at 4925 Evanston Avenue in the City of Muskegon, Muskegon County, Michigan, with State Registration Number (SRN) B5966. The MDEQ alleges that the Company is in violation of Permit to Install (PTI) Nos. 351-82C and 1058-84D. Specifically, the MDEQ alleges that the Company failed to maintain emission records of hazardous air pollutants, volatile organic compounds, particulate matter, oxides of nitrogen and sulfur dioxide as cited herein and in the Violation Notice dated September 9, 2013. The Company and MDEQ stipulate to the termination of this proceeding by entry of this Stipulation for Entry of a Final Order by Consent (Consent Order).

The Company and MDEQ stipulate as follows:

1. The Natural Resources and Environmental Protection Act, 1994 PA 451 (Act 451), MCL 324.101 *et seq.* is an act that controls pollution to protect the environment and natural resources in this State.
2. Article II, Pollution Control, Part 55 of Act 451 (Part 55), MCL 324.5501 *et seq.* provides for air pollution control regulations in this State.
3. The MDEQ was created as a principal department within the Executive Branch of the State of Michigan pursuant to Executive Order 2011-1 and has all statutory authority, powers, duties, functions and responsibilities to administer and enforce all provisions of Part 55.
4. The Director has delegated authority to the Chief of the AQD (AQD Chief) to enter into this Consent Order.

5. The termination of this matter by a Consent Order pursuant to Section 5528 of Part 55 is proper and acceptable.

6. The Company and the MDEQ agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the Company that the law has been violated.

7. This Consent Order becomes effective on the date of execution (effective date of this Consent Order) by the AQD Chief.

8. The Company shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in this Consent Order.

COMPLIANCE PROGRAM AND IMPLEMENTATION SCHEDULE

9. Permit

On and after the effective date of this Consent Order, the Company shall fully comply with PTI Nos. 1058-84D; 153-13; 154-13; 155-13, and 156-13, and any subsequent permit revisions, that are attached to this Consent Order as Exhibits A through E and made an enforceable part of this Consent Order.

GENERAL PROVISIONS

10. This Consent Order in no way affects the Company's responsibility to comply with any other applicable state and federal, or local laws or regulations, including without limitation, any amendments to the federal Clean Air Act, 42 USC 7401 *et seq.*, Act 451, Part 55 or their rules and regulations, or to the State Implementation Plan.

11. This Consent Order constitutes a civil settlement and satisfaction as to the resolution of the violations specifically addressed herein; however, it does not resolve any criminal action that may result from these same violations.

12. Within thirty (30) days after the effective date of this Consent Order, the Company shall pay to the General Fund of the State of Michigan, in the form of a check made payable to the "State of Michigan" and mailed to the Michigan Department of Environmental Quality, Accounting Services Division, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157, a settlement amount of \$22,500.00 which includes AQD costs for investigation and enforcement. This total settlement amount

shall be paid within thirty (30) days of the effective date of this Consent Order. To ensure proper credit, all payments made pursuant to this Consent Order shall include the "Payment Identification Number AQD40049" on the front of the check and/or in the cover letter with the payment. This settlement amount is in addition to any fees, taxes, or other fines that may be imposed on the Company by law.

13. On and after the effective date of this Consent Order, if the Company fails to comply with the emission recordkeeping requirements for hazardous air pollutants, particulate matter, oxides of nitrogen and sulfur dioxide specified in PTI Nos. 1058-84D and 155-13, the Company is subject to a stipulated fine of up to \$5,000.00 per violation. On and after the effective date of this Consent Order, if the Company fails to comply with any other provision of this Consent Order, the Company is subject to a stipulated fine of up to \$1,000.00 per violation. The amount of the stipulated fines imposed pursuant to this paragraph shall be within the discretion of the MDEQ. Stipulated fines submitted under this Consent Order shall be by check, payable to the State of Michigan within thirty (30) days of written demand and shall be mailed to the Michigan Department of Environmental Quality, Accounting Services Division, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments shall include the "Payment Identification Number AQD40049-S" on the front of the check and/or in the cover letter with the payment. Payment of stipulated fines shall not alter or modify in any way the Company's obligation to comply with the terms and conditions of this Consent Order.

14. The AQD, at its discretion, may seek stipulated fines or statutory fines for any violation of this Consent Order which is also a violation of any provision of applicable federal and state law, rule, regulation, permit, or MDEQ administrative order. However, the AQD is precluded from seeking both a stipulated fine under this Consent Order and a statutory fine for the same violation.

15. To ensure timely payment of the settlement amount assessed in paragraph 12 and any stipulated fines assessed pursuant to paragraph 13 of this Consent Order, the Company shall pay an interest penalty to the State of Michigan each time it fails to make a complete or timely payment under this Consent Order. The interest penalty shall be determined at a rate of twelve percent (12%) per year compounded annually, using the full increment of amount due as principal, calculated from the due date specified in this Consent Order until the date that delinquent payment is finally paid in full. Payment of an interest penalty by the Company shall be made to the State of Michigan in accordance with paragraph 13 of this Consent Order. Interest payments shall be applied first towards the most overdue

amount or outstanding interest penalty owed by the Company before any remaining balance is applied to subsequent payment amount or interest penalty.

16. The Company agrees not to contest the legal basis for the settlement amount assessed pursuant to paragraph 12. The Company also agrees not to contest the legal basis for any stipulated fines assessed pursuant to paragraph 13 of this Consent Order, but reserves the right to dispute in a court of competent jurisdiction the factual basis upon which a demand by MDEQ of stipulated fines is made. In addition, the Company agrees that said fines have not been assessed by the MDEQ pursuant to Section 5529 of Part 55 and therefore are not reviewable under Section 5529 of Part 55.

17. The compliance program in this Consent Order is not a variance subject to the 12 month limitation specified in Section 5538 of Part 55.

18. This Consent Order shall remain in full force and effect for a period of at least three (3) years. Thereafter, the Consent Order shall terminate only upon written notice of termination issued by the AQD Chief. Prior to issuance of a written notice of termination, the Company shall submit a request, to the AQD Chief at the Michigan Department of Environmental Quality, Air Quality Division, P.O. Box 30260, Lansing, Michigan 48909-7760, consisting of a written certification that the Company has fully complied with all the requirements of this Consent Order and has made all payments including all stipulated fines required by this Consent Order. Specifically, this certification shall include: (i) the date of compliance with each provision of the compliance program and the date any payments or stipulated fines were paid; (ii) a statement that all required information has been reported to the AQD Grand Rapids District Office Supervisor; (iii) confirmation that all records required to be maintained pursuant to this Consent Order are being maintained at the facility; and, (iv) such information as may be requested by the AQD Chief.

19. In the event the Company sells or transfers the facility, with SRN B5966, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within thirty (30) calendar days, the Company shall also notify the AQD Grand Rapids District Office Supervisor, 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 and/or transferee. As a condition of the sale, the Company must obtain the consent of the purchaser and/or transferee, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the

AQD Grand Rapids District Office Supervisor within thirty (30) days of assuming the obligations of this Consent Order.

20. Prior to the effective date of this Consent Order and pursuant to the requirements of Sections 5511 and 5528(3) of Part 55, the public was notified of a 30-day public comment period and was provided the opportunity for a public hearing.

21. Section 5530 of Part 55 may serve as a source of authority but not a limitation under which the Consent Order may be enforced. Further, Part 17 of Act 451 and all other applicable laws and any other legal basis or applicable statute may be used to enforce this Consent Order.

22. The Company hereby stipulates that entry of this Consent Order is a result of an action by MDEQ to resolve alleged violations of its facility located at 4925 Evanston Avenue, Muskegon, Michigan. The Company further stipulates that it will take all lawful actions necessary to fully comply with this Consent Order, even if the Company files for bankruptcy in the future. The Company will not seek discharge of the settlement amount and any stipulated fines imposed hereunder in any future bankruptcy proceedings, and the Company will take necessary steps to ensure that the settlement amount and any future stipulated fines are not discharged. The Company, during and after any future bankruptcy proceedings, will ensure that the settlement amount and any future stipulated fines remain an obligation to be paid in full by the Company to the extent allowed by applicable bankruptcy law.

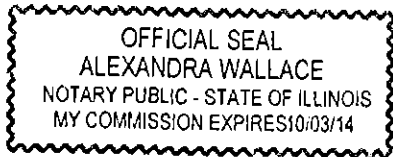
The undersigned certifies that he/she is fully authorized by the Company to enter into this Consent Order and to execute and legally bind the Company to it.

SUN CHEMICAL CORPORATION

GARY ANDRZEJEWSKI, Corporate Vice President, Env. Affairs
Print Name and Title

[Signature] Date: 8/22/2014
Signature

The above signatory subscribed and sworn to before me this 22nd day of August, 2014.



Alexandra Wallace
Notary Public

Approved as to Content:

Approved as to Form:

MaryAnn Dolcharty
for Lynn Fiedler, Acting Chief
AIR QUALITY DIVISION
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Neil Gordon
Neil Gordon, Section Head
ENVIRONMENTAL REGULATION SECTION
ENVIRONMENT, NATURAL RESOURCES,
AND AGRICULTURE DIVISION
DEPARTMENT OF ATTORNEY GENERAL

Dated: 9/4/14

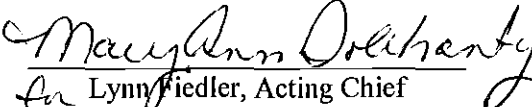
Dated: 8/28/2014

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 Environmental Quality pursuant to the provisions of Part 55 of Act 451 and otherwise being fully advised on the premises,

HAS HEREBY ORDERED that the Consent Order is approved and shall be entered in the record of the MDEQ as a Final Order.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY


for Lynn Fiedler, Acting Chief
Air Quality Division

Effective Date: 9/4/14

AQD No. 42-2014

Exhibit A

Permit No. 1058-84D

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 ₂ e	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 ₂ S	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	Malfuction 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)	Installation Date / Modification Date	Flexible Group ID
EU-S1	750 HP natural gas and landfill gas fired Johnston Boiler.	2-11-1985/ 9-26-1995, 11-18-2002, 12-8-2008, 5-17-13	N/A
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-S1

DESCRIPTION: 750 HP natural gas and landfill gas fired Johnston Boiler.

Flexible Group ID: N/A

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. SO ₂	89 tpy	12-month rolling time period as determined at the end of each calendar month	EU-S1	SC VI.1, SC VI.3, SC VI.4	R 336.1205(3)
Limits do not include startup, shutdown, and malfunction conditions.					

II. MATERIAL LIMITS

1. The landfill gas usage for EU-S1 shall not exceed 492.0 million cubic feet per 12-month rolling time period as determined at the end of each calendar month. **(R 1205(3))**

III. PROCESS/OPERATIONAL RESTRICTIONS

N/A

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the landfill gas usage for EU-S1 on a monthly basis. **(R 336.1205(3))**

V. TESTING/SAMPLING

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 complete all required calculations 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. **(R 336.1205(3))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period SO₂ emission calculation records for EU-S1, using the most recent landfill gas sulfur content sampling data. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
3. The permittee shall keep monthly and 12-month rolling time period landfill gas usage records, in a format acceptable to the AQD District Supervisor, for EU-S1. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
4. The permittee shall keep records of emissions and operating information for EU-S1 to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc. The permittee shall keep all source emissions data and operating information on file and make them available to the Department upon request. **(40 CFR Part 60 Subparts A & Dc)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-S1. **(R 336.1201(7)(a))**

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. SVL1 prior to August 1, 2013	54	54	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
2. SVL1 on and after August 1, 2013	36	60	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to EU-S1. **(40 CFR Part 60 Subparts A & Dc)**

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-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	N/A

The following conditions apply Source-Wide to: FG-FACILITY

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO _x	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
2. PM	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
3. SO ₂	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)

Limits do not include startup, shutdown, and malfunction conditions.

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-FACILITY unless an approvable preventative maintenance and operating plan has been submitted to the AQD District Supervisor within 90 days of issuance of the permit. The plan shall include procedures for maintaining and operating all air pollution control devices or monitoring equipment to ensure all equipment within FG-FACILITY is maintained and operated in a satisfactory matter. A copy of the plan must also be maintained at the facility. **(R 336.1911, R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage for FG-FACILITY on a monthly basis. **(R 336.1205(3))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the landfill gas usage for FG-FACILITY on a monthly basis. **(R 36.1205(3))**

V. TESTING/SAMPLING

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 complete all required calculations 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. **(R 336.1205(3))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period NO_x emission calculation records for FG-FACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period PM emission calculation records for FG-FACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period SO₂ emission calculation records for FG-FACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
5. The permittee shall keep, in a satisfactory manner, monthly natural gas use records for FG-FACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
6. The permittee shall keep, in a satisfactory manner, monthly landfill gas use records for FG-FACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

N/A

VIII. STACK/VENT RESTRICTIONS

N/A

IX. OTHER REQUIREMENTS

N/A

Footnotes:

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

AQD No. 42-2014

Exhibit B

Permit No. 153-13

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 ₂ e	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 ₂ S	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-SSlurry04T008	South Slurry Mix Tank (ID # 04T008), exhausts to SV-Stack6	FG-IB
EU-NSlurry04T018	North Slurry Mix Tank (ID # 04T018), exhausts to SV-Stack6	FG-IB
EU-NDecon04T7302	North Decontamination Tank (ID # 04T7302), exhausts to SV-Stack6	FG-IB
EU-SDecon04T7312	South Decontamination Tank (ID # 04T7312), exhausts to SV-Stack6	FG-IB
EU-HdTnk04T4205	Head Tank (ID # 04T4205) (Sodium Nitrite), uncontrolled, exhausts into building	FG-TZ
EU-HdTnk04T4215	Head Tank (ID # 04T4215) (Sodium Nitrite), uncontrolled, exhausts into building	FG-TZ
EU-Tank04T4206	Tank/Overflow (ID # 04T4206) (HCl), exhausts to SV-Stack4	FG-TZ
EU-Tank04T4216	Tank/Overflow (ID # 04T4216) (HCl), exhausts to SV-Stack4a	FG-TZ
EU-Tank04T4208	Tank/Overflow (ID # 04T4208) (DCB Slurry), exhausts to SV-Stack4	FG-TZ
EU-Tank04T4218	Tank/Overflow (ID # 04T4218) (DCB Slurry), exhausts to SV-Stack4a	FG-TZ
EU-TZ4302	Tetrazo Tank (ID # 04T4302), exhausts to SV-Stack4	FG-TZ
EU-TZ4312	Tetrazo Tank (ID # 04T4312), exhausts to SV-Stack4a	FG-TZ
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.		

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-IB	All process equipment involved in the unpacking and blending of 3,3'-dichlorobenzidine (DCB) into solution.	EU-SSlurry04T008, EU-NSlurry04T018, EU-NDecon04T7302, EU-SDecon04T7312
FG-TZ	All process equipment utilized in the formation of the tetrazo component.	EU-HdTnk04T4205, EU-HdTnk04T4215, EU-Tank04T4206, EU-Tank04T4216, EU-Tank04T4208, EU-Tank04T4218, EU-TZ4302, EU-TZ4312

The following conditions apply to: FG-IB

DESCRIPTION: All process equipment involved in the unpacking and blending of 3,3'-dichlorobenzidine (DCB) into solution.

Emission Units: EU-SSlurry04T008, EU-NSlurry04T018, EU-NDecon04T7302, EU-SDecon04T7312

POLLUTION CONTROL EQUIPMENT:

Absolute Filter ID #:
 4AF7010
 Caustic Scrubber ID #:
 04S7010

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Hydrogen chloride (HCl)	1.02 mg/m ^{3 A, 1}	Test protocol *	FG-IB	GC 13	R 336.1225
2. 3,3'-Dichlorobenzidine (DCB)	0.02 µg/m ^{3 A, 1}	Test protocol *	FG-IB	SC VI.1	R 336.1224
3. PM	0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis	Test protocol *	FG-IB	GC 13	R 336.1331
4. Opacity	0% ^B	6-minute average	FG-IB	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 charge raw materials to the process equipment in a manner that minimizes fugitive emissions of air contaminants. **(R 336.1331, R 336.1702(a))**
2. The permittee shall not operate FG-IB unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-IB, 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 equip and maintain the caustic scrubber (ID # 04S7010) with a liquid flow indicator and an audible malfunction alarm system. **(R 336.1910)**
2. The permittee shall equip and maintain the absolute filter (ID # 4AF7010) 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 not operate any of the equipment in FG-IB unless the control devices listed below are installed, maintained, and operated in a satisfactory manner:
 - a. Absolute filter (ID # 4AF7010)
 - b. Caustic scrubber (ID # 04S7010)Satisfactory operation includes maintaining operating parameters within the ranges specified in the MAP. **(R 336.1224, R 336.1225, R 336.1331, 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 the DCB emissions from FG-IB 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-IB. 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. **(R 336.1225)**
2. The permittee shall monitor and record, in a satisfactory manner, the operating parameters for absolute filter (ID # 4AF7010) and caustic scrubber (ID # 04S7010) 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 336.1910)**

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-Stack6	Not restricted	30	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-TZ

DESCRIPTION: All process equipment utilized in the formation of the tetrazo component.

Emission Units: EU-HdTnk04T4205, EU-HdTnk04T4215, EU-Tank04T4206, EU-Tank04T4216, EU-Tank04T4208, EU-Tank04T4218, EU-TZ4302, EU-TZ4312

POLLUTION CONTROL EQUIPMENT:

Caustic Scrubber ID #s:
 04S7020
 04S7120

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Hydrogen chloride (HCl)	3.63 mg/m ^{3 A, 1}	Test protocol *	Equipment in FG-TZ that exhausts to Stack4	GC 13	R 336.1225
2. 3,3'-Dichlorobenzidine (DCB)	0.02 µg/m ^{3 A, 1}	Test protocol *	Equipment in FG-TZ that exhausts to Stack4	SC VI.1	R 336.1225
^A Corrected to 70 degrees F and 29.92 inches Hg * Test protocol shall specify averaging time.					

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not charge solid materials to FG-TZ unless they are in slurry form. **(R 336.1331)**
2. The permittee shall not operate FG-TZ unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-TZ, 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 equip and maintain each caustic scrubber (ID # 04S7020 and ID # 04S7120) with a liquid flow indicator and an audible malfunction alarm system. **(R 336.1910)**
2. The permittee shall not operate the equipment in FG-TZ that exhausts to SV-Stack4 unless caustic scrubber (ID # 04S7020) 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)**

3. The permittee shall not operate the equipment in FG-TZ that exhausts to SV-Stack4a unless caustic scrubber (ID # 04S7120) 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)**
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 the DCB emissions from the equipment in FG-TZ that exhausts to SV-Stack4 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-TZ. 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. **(R 336.1225)**
2. The permittee shall monitor and record, in a satisfactory manner, the operating parameters for caustic scrubbers (ID #s 04S7020, 04S7120) 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 336.1910)**

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-Stack4	Not restricted	48.0	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV-Stack4a	Not restricted	48.0	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

AQD No. 42-2014

Exhibit C

Permit No. 154-13

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 ₂ e	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 ₂ S	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-DB09U250	Unloading operations to feed Dry Blue mills. Controlled by baghouse (ID # 09BHU250).	FG-DryBlue
EU-DB09U260	Unloading operations to feed Dry Blue mills. Controlled by baghouse (ID # 09BHU260).	FG-DryBlue
EU-DB09U270	Unloading operations to feed Dry Blue mills. Controlled by baghouse (ID # 09BHU270).	FG-DryBlue
EU-DBResin1	Dry Blue Resin break-up station. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBResin2	Dry Blue Resin break-up station. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale1	Dry Blue Scale for Dry Blue mills 1 and 2. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale2	Dry Blue Scale for Dry Blue mills 3 and 4. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale3	Dry Blue Scale for Dry Blue mills 5 and 6. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale4	Dry Blue Scale for Dry Blue mills 7 and 8. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale5	Dry Blue Scale for Dry Blue mills 9 and 10. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBScale6	Dry Blue Scale for Dry Blue mills 11 and 12. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill1	Dry Blue Mill 1 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill2	Dry Blue Mill 2 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill3	Dry Blue Mill 3 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill4	Dry Blue Mill 4 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill5	Dry Blue Mill 5 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill6	Dry Blue Mill 6 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-DBMill7	Dry Blue Mill 7 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill8	Dry Blue Mill 8 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill9	Dry Blue Mill 9 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill10	Dry Blue Mill 10 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill11	Dry Blue Mill 11 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBMill12	Dry Blue Mill 12 – Mill used for grinding dry blue pigment; mill is equipped with dust collection around the seal of the mill. Controlled by baghouse (ID # 09T142).	FG-DryBlue
EU-DBSilo1	Dry Blue silo with a receiver baghouse for pigment from Dry Blue mills. Controlled by filter (ID # 09F146B).	FG-DryBlue
EU-DBSilo2	Dry Blue silo with a receiver baghouse for pigment from Dry Blue mills. Controlled by filter (ID # 09F146B).	FG-DryBlue
EU-DBSilo3	Dry Blue silo with a receiver baghouse for pigment from Dry Blue mills. Controlled by filter (ID # 09F146B).	FG-DryBlue
EU-DBPackout	Dry Blue pack-out station with a product receiver baghouse (ID # 09T142) for pigment from Dry Blue mills; product is transferred pneumatically via vacuum pump.	FG-DryBlue
EU-DBPreMixA	Dry Blue pigment product receiver for feeding EU-WBPreMix151A.	FG-DryBlue
EU-DBPreMixB	Dry Blue pigment product receiver for feeding EU-WBPreMix151B.	FG-DryBlue
EU-WBPreMix151A	Wet Blue Premix tank 10R151A. Controlled by condenser (ID # E-3213).	FG-WetBlue
EU-WBPreMix151B	Wet Blue Premix tank 10R151B. Controlled by condenser (ID # E-3213).	FG-WetBlue
EU-WBFeed151C	Wet Blue Feed tank 10R151C. Controlled by condenser (ID # E-3202).	FG-WetBlue
EU-WBFeed151D	Wet Blue Feed tank 10R151D. Controlled by condenser (ID # E-3212).	FG-WetBlue
EU-WBMillSurge1	Wet Blue Mill Surge tank 1. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge2	Wet Blue Mill Surge tank 2. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge3	Wet Blue Mill Surge tank 3. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge4	Wet Blue Mill Surge tank 4. Controlled by condenser (ID # E-3201).	FG-WetBlue

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-WBMillSurge5	Wet Blue Mill Surge tank 5. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge6	Wet Blue Mill Surge tank 6. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge7	Wet Blue Mill Surge tank 7. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge8	Wet Blue Mill Surge tank 8. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge9	Wet Blue Mill Surge tank 9. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBMillSurge10	Wet Blue Mill Surge tank 10. Controlled by condenser (ID # E-3201).	FG-WetBlue
EU-WBLtDwn154A	Wet Blue Letdown tank 154A. Controlled by condenser (ID # E-3204).	FG-WetBlue
EU-WBLtDwn154B	Wet Blue Letdown tank 154B. Controlled by condenser (ID # E-3204).	FG-WetBlue
EU-WBLtDwn154C	Wet Blue Letdown tank 154C. Controlled by condenser (ID # E-3204).	FG-WetBlue
EU-WBPackout	Wet Blue pack-out of finished blue product to Gaylord (plastic lined box).	FG-WetBlue
EU-HVfVarn	Bulk storage tanks of varnish and oil. ID #s: 10T200A, 10T200B, 10T200C, 10T200D, 10T200E, 10T200F, 10T200G, 10T200H, 10T200J, 10T240A, 10T240B, 10T240C, 10T240D	NA
EU-HVfYeIA	High Volume Flush Process Yellow A, includes Yellow A Composite Tank (ID# 08T8201), Yellow A Wash Tank (ID# 08T8301), and Yellow A Letdown Tank (ID# 08T8401); the process is controlled by an entrainment separator (ID# 08T8501) and condensers (ID#s: 08E8501, 08E8511).	FG-Flush
EU-HVfYeIB	High Volume Flush Process Yellow B, includes Yellow B Composite Tank (ID# 08T8202), Yellow B Wash Tank (ID# 08T8302), and Yellow B Letdown Tank (ID# 08T8402); the process is controlled by an entrainment separator (ID# 08T8502) and condensers (ID#s: 08E8502, 08E8512).	FG-Flush
EU-HVfYeIC	High Volume Flush Process Yellow C, includes Yellow C Composite Tank (ID# 08T8203), Yellow C Wash Tank (ID# 08T8303), and Yellow C Letdown Tank (ID# 08T8403); the process is controlled by an entrainment separator (ID# 08T8503) and condensers (ID#s: 08E8503, 08E8513).	FG-Flush
EU-HVfYeIPkout	Yellow Flush pack-out operations of finish yellow product to Gaylord boxes (plastic lined).	FG-Flush
EU-HVfRedA	High Volume Flush Process Red A, includes Red A Composite Tank (ID# 08T8205), Red A Wash Tank (ID# 08T8305), and Red A Letdown Tank (ID# 08T8405); the process is controlled by an entrainment separator (ID# 08T8505) and condensers (ID#s: 08E8505, 08E8515).	FG-Flush

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-HVFRdB	High Volume Flush Process Red B, includes Red B Composite Tank (ID# 08T8206), Red B Wash Tank (ID# 08T8306), and Red B Letdown Tank (ID# 08T8406); the process is controlled by an entrainment separator (ID# 08T8506) and condensers (ID#s: 08E8506, 08E8516).	FG-Flush
EU-HVFRdC	High Volume Flush Process Red C, includes Red C Composite Tank (ID# 08T8204), Red C Wash Tank (ID# 08T8304), and Red C Letdown Tank (ID# 08T8404); the process is controlled by an entrainment separator (ID# 08T8504) and condensers (ID#s: 08E8504,08E8514).	FG-Flush
EU-HVFRdPkout	Red Flush Packout operations of finish red product to Gaylord boxes (plastic lined).	FG-Flush
EU-TruckPkout	Pack-out of Red Flush, Yellow Flush, and Wet Blue finished product to tanker trucks.	FG-Flush
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.		

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-DryBlue	<p>All process equipment utilized in the Dry Blue Pigment process and associated equipment. The Dry Blue pigment process operates in the HVF building. It receives dry blue pigment, which then is ground and mixed with various materials. The material is dry throughout this process. Several baghouses and a filter control some emissions.</p>	<p>EU-DB09U250, EU-DB09U260, EU-DB09U270, EU-DBResin1, EU-DBResin2, EU-Scale1, EU-Scale2, EU-Scale3, EU-Scale4, EU-Scale5, EU-Scale6, EU-DBMill1, EU-DBMill2, EU-DBMill3, EU-DBMill4, EU-DBMill5, EU-DBMill6, EU-DBMill7, EU-DBMill8, EU-DBMill9, EU-DBMill10, EU-DBMill11, EU-DBMill12, EU-DBSilo1, EU-DBSilo2, EU-DBSilo3, EU-DBPackout, EU-DBPreMixA, EU-DBPreMixB</p>
FG-WetBlue	<p>All process equipment utilized in the Wet Blue Pigment process and associated equipment. The Wet Blue, or Blue Flush, process operates in the HVF building. It receives a mixture of organic pigment and varnish and transfers the pigment to a varnish/oil mixture. The equipment produces pigment in suspension in the varnish/oil mixture. The flexible group includes packout and shipping operations. Refrigerated condensers control some emissions.</p>	<p>EU-WBPreMix151A, EU-WBPreMix151B, EU-WBFeed151C, EU-WBFeed151D, EU-WBMillSurge1, EU-WBMillSurge2, EU-WBMillSurge3, EU-WBMillSurge4, EU-WBMillSurge5, EU-WBMillSurge6, EU-WBMillSurge7, EU-WBMillSurge8, EU-WBMillSurge9, EU-WBMillSurge10, EU-WBLtDwn154A, EU-WBLtDwn154B, EU-WBLtDwn154C, EU-WBPackout</p>
FG-Flush	<p>All process equipment utilized in the flushing process of Azo Red and Azo Yellow. The Azo Yellow and Azo Red flush process operates in the HVF building. It receives a mixture of organic pigment and water and transfers the pigment to a varnish/oil mixture. The flexible group produces pigment in suspension in the varnish/oil mixture. The flexible group includes packout and shipping operations. Refrigerated condensers control some emissions.</p>	<p>EU-HVFYelA, EU-HVFYelB, EU-HVFYelC, EU-HVFRedA, EU-HVFRedB, EU-HVFRedC, EU-HVFYelPkout, EU-HVFRedPkout, EU-TruckPkout</p>

The following conditions apply to: FG-DryBlue

DESCRIPTION: All process equipment utilized in the Dry Blue Pigment process and associated equipment. The Dry Blue pigment process operates in the HVF building. It receives dry blue pigment, which then is ground and mixed with various materials. The material is dry throughout this process.

Emission Units: EU-DB09U250, EU-DB09U260, EU-DB09U270, EU-DBResin1, EU-DBResin2, EU-DBScale1, EU-DBScale2, EU-DBScale3, EU-DBScale4, EU-DBScale5, EU-DBScale6, EU-DBMill1, EU-DBMill2, EU-DBMill3, EU-DBMill4, EU-DBMill5, EU-DBMill6, EU-DBMill7, EU-DBMill8, EU-DBMill9, EU-DBMill10, EU-DBSilo1, EU-DBSilo2, EU-DBSilo3, EU-DBPackout, EU-DBPreMixA, EU-DBPreMixB

POLLUTION CONTROL EQUIPMENT:

Baghouse ID #s:
 09BHU250
 09BHU260
 09BHU270
 09T142
 Filter ID #:
 09F146B

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.002 lbs/1000 lbs of exhaust gases, calculated on a dry basis	Test protocol*	FG-DryBlue	GC 13	R 336.1331
2. Visible Emissions	5% opacity ^A	6-minute average	FG-DryBlue	SC VI.2	R 336.1301, R 336.1331
^A Except for uncombined water vapor					
* Test protocol shall specify averaging time					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Dry Blue raw material processed	17,640,000 lbs	12-month rolling time period as determined at the end of each calendar month	FG-DryBlue	SC VI.1	R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-DryBlue unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-DryBlue, 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 emission units in the table below unless the associated control device is installed, maintained, and operated in a satisfactory manner:

	Emission Unit	Baghouse	Filter
a.	EU-DB09U250	09BHU250	--
b.	EU-DB09U260	09BHU260	--
c.	EU-DB09U270	09BHU270	--
d.	EU-DBResin1, EU-DBResin2, EU-DBScale1, EU-DBScale2, EU-DBScale3, EU-DBScale4, EU-DBScale5, EU-DBScale6, EU-DBMill1, EU-DBMill2, EU-DBMill3, EU-DBMill4, EU-DBMill5, EU-DBMill6, EU-DBMill7, EU-DBMill8, EU-DBMill9, EU-DBMill10, EU-DBMill11, EU-DBMill12, EU-DBPackout	09T142	--
e.	EU-DBSilo1, EU-DBSilo2, EU-DBSilo3	--	09F146B

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 baghouses (ID #s 09BHU250, 09BHU260, 09BHU270, 09T142) with pressure drop indicators with audio alarms that sound when the pressure drop exceeds the value 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 keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of Dry Blue raw material processed in FG-DryBlue each month and 12-month rolling time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**
2. The permittee shall monitor and record, in a satisfactory manner, the operating parameters for the baghouses (ID #s 09BHU250, 09BHU260, 09BHU270, 09T142) and filter (ID # 09F146B) 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 336.1910)**

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-Stack17	10 ¹	53 ¹	R 336.1225
2. SV-Stack18	16 ¹	53.5 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-WetBlue

DESCRIPTION: All process equipment utilized in the Wet Blue Pigment process and associated equipment. The Wet Blue, or Blue Flush, process operates in the HVF building. It receives a mixture of organic pigment and varnish and transfers the pigment to a varnish/oil mixture. The equipment produces pigment in suspension in the varnish/oil mixture. The flex group includes packout and shipping operations. Refrigerated condensers control some emissions.

Emission Units: EU-WBPreMix151A, EU-WBPreMix151B, EU-WBFeed151C, EU-WBFeed151D, EU-WBMillSurge1, EU-WBMillSurge2, EU-WBMillSurge3, EU-WBMillSurge4, EU-WBMillSurge5, EU-WBMillSurge6, EU-WBMillSurge7, EU-WBMillSurge8, EU-WBMillSurge9, EU-WBMillSurge10, EU-WBLtDwn154A, EU-WBLtDwn154B, EU-WBLtDwn154C, EU-WBPackout

POLLUTION CONTROL EQUIPMENT:

Condenser ID #s:

- E-3213
- E-3202
- E-3212
- E-3201
- E-3204

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	2.6 lb/hr ¹	Test protocol*	Equipment in FG-WetBlue exhausted through SV-18	GC 13	R 336.1225
2. VOC	0.93 lb/hr ¹	Test protocol*	Equipment in FG-WetBlue exhausted through SV-EV1A	GC 13	R 336.1225
3. VOC	0.04 lb/hr ¹	Test protocol*	Equipment in FG-WetBlue exhausted through SV-EV1B	GC 13	R 336.1225
4. VOC	2.16 tons/yr	12-month rolling time period as determined at the end of each calendar month	FG-WetBlue	SC VI.3	R 336.1702(a)

* Test protocol shall specify averaging time.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Wet blue flush pigment	1,113 batches produced	12-month rolling time period as determined at the end of each calendar month	FG-WetBlue	SC VI.2	R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate any equipment in EU-WetBlue that is exhausted to a refrigerated condenser unless an updated malfunction abatement plan (MAP) as described in Rule 911(2), for the refrigerated condensers in EU-WetBlue and equipment that is exhausted to them, has been submitted within 60 days of permit issuance, and is implemented and maintained. This submittal may take the form of an update to the relevant portions of the facility's existing MAP. 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 District Supervisor. The permittee shall submit the MAP and 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 336.1702(a), R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the emission units in the table below unless the associated refrigerated condenser is installed, maintained, and operated in a satisfactory manner:

	Emission Unit	Control Device	Stack ID#
a.	EU-WBPreMix151A, EU-WBPreMix151B	Condenser E-3213	SV-Stack18
b.	EU-WBFeed151C	Condenser E-3202	SV-Stack18
c.	EU-WBFeed151D	Condenser E-3212	SV-Stack18
d.	EU-WBMillSurge1, EU-WBMillSurge2, EU-WBMillSurge3, EU-WBMillSurge4, EU-WBMillSurge5 EU-WBMillSurge6, EU-WBMillSurge7, EU-WBMillSurge8, EU-WBMillSurge9, EU-WBMillSurge10	Condenser E-3201	SV-Stack18
e.	EU-WBLtDwn154A, EU-WBLtDwn154B, EU-WBLtDwn154C	Condenser E-3204	SV-Stack18

Satisfactory operation includes maintaining the exhaust gas temperature within the range specified in the MAP. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall equip and maintain each refrigerated condenser in EU-WetBlue with an exhaust gas temperature indicator. **(R 336.1910)**
3. The permittee shall equip and maintain each refrigerated condenser in FG-WetBlue with an alarm system that sounds an audible alarm when the exhaust gas temperature is not within the ranges 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 complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1702(a))**
2. The permittee shall record, in a satisfactory manner, the number of batches of wet blue flush pigment processed in EU-WetBlue on a monthly and rolling 12-month time period basis. **(R 336.1702(a))**
3. The permittee shall calculate the VOC emission rate from EU-WetBlue monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**
4. The permittee shall monitor and record, in a satisfactory manner, the exhaust gas temperature from each refrigerated condenser in EU-WetBlue on a continuous basis. The permittee shall keep all 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-EV1A	Not restricted	37.5 ¹	R 336.1225
2. SV-EV1B	Not restricted	39.5 ¹	R 336.1225
3. SV-Stack18	16 ¹	53.5 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-Flush

DESCRIPTION: All process equipment utilized in the flushing process of Azo Red and Azo Yellow. The Azo Yellow and Azo Red flush process operates in the HVF building. It receives a mixture of organic pigment and water and transfers the pigment to a varnish/oil mixture. The emission unit produces pigment in suspension in the varnish/oil mixture. The emission unit includes packout and shipping operations. Refrigerated condensers control some emissions.

Emission Units: EU-HVfYeIA, EU-HVfYeIB, EU-HVfYeIC, EU-HVfYeIPkout, EU-HVfRedA, EU-HVfRedB, EU-HVfRedC, EU-HVfRedPkout, EU-TruckPkout

POLLUTION CONTROL EQUIPMENT: Demisters, Refrigerated Condensers, Entrainment Separators

Emission Unit	Demister *	Condenser	Entrainment Separator *
EU-HVfYeIA	08F8321, 08F8401	08E8501 / 08E8511	08T8501
EU-HVfYeIB	08F8322, 08F8402	08E8502 / 08E8512	08T8502
EU-HVfYeIC	08F8323, 08F8403	08E8503 / 08E8513	08T8503
EU-HVfRedA	08F8325, 08F8405	08E8505 / 08E8515	08T8505
EU-HVfRedB	08F8326, 08F8406	08E0506 / 08E8516	08T0506
EU-HVfRedC	08F8324, 08F8404	08E8504 / 08E8514	08T8504

* Demisters and Entrainment Separators are listed in the table for informational purposes only, and are not included in the enforceable conditions. Demisters 08F8321-08F8326 are on Wash Tanks; demisters 08F8401-08F8406 are on Letdown Tanks.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Azo Flush processed through the Letdown Tanks	88,200,000 lbs	12-month rolling time period as determined at the end of each calendar month	FG-Flush	SC VI.2	R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall not operate any equipment in FG-Flush that is exhausted to a refrigerated condenser unless an updated malfunction abatement plan (MAP) as described in Rule 911(2), for the refrigerated condensers in FG-Flush and equipment that is exhausted to them, has been submitted within 60 days of permit issuance, and is implemented and maintained. This submittal may take the form of an update to the relevant portions of the facility's existing MAP. 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 District Supervisor. The permittee shall submit the MAP and 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 MAP or 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 336.1702(a), R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the emission units in the table below unless both of the associated refrigerated condensers listed are installed, maintained, and operated in a satisfactory manner:

	Emission Unit	Condenser	Stack #
a.	EU-HVfYeIA	08E8501 / 08E8511	SV-Stack29D
b.	EU-HVfYeIB	08E8502 / 08E8512	SV-Stack29E
c.	EU-HVfYeIC	08E8503 / 08E8513	SV-Stack29F
d.	EU-HVfRedA	08E8505 / 08E8515	SV-Stack29A
e.	EU-HVfRedB	08E8506 / 08E8516	SV-Stack29B
f.	EU-HVfRedC	08E8504 / 08E8514	SV-Stack29C

Satisfactory operation includes maintaining the exhaust gas temperature within the range specified in the MAP. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall equip and maintain each refrigerated condenser in FG-Flush with an exhaust gas temperature indicator. **(R 336.1910)**
3. The permittee shall equip and maintain each condenser in FG-Flush with an alarm system that sounds an audible alarm when the exhaust gas temperature is not within the ranges 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 complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1702(a))**
2. The permittee shall record, in a satisfactory manner, the amount of Azo Flush processed through the Letdown Tanks in FG-Flush on a monthly and rolling 12-month time period basis. **(R 336.1702(a))**
3. The permittee shall monitor and record, in a satisfactory manner, the exhaust gas temperature from each refrigerated condenser in FG-Flush on a continuous basis. The permittee shall keep all 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-Stack29A	2 ¹	48 ¹	R 336.1225
2. SV-Stack29B	2 ¹	48 ¹	R 336.1225
3. SV-Stack29C	2 ¹	48 ¹	R 336.1225
4. SV-Stack29D	2 ¹	48 ¹	R 336.1225
5. SV-Stack29E	2 ¹	48 ¹	R 336.1225
6. SV-Stack29F	2 ¹	48 ¹	R 336.1225
7. SV-Stack30A	18 ¹	79 ¹	R 336.1225
8. SV-Stack30B	18 ¹	79 ¹	R 336.1225
9. EV-2A	24 ¹	44 ¹	R 336.1225
10. EV-2B	24 ¹	44 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

AQD No. 42-2014

Exhibit D

Permit No. 155-13

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 ₂ e	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 ₂ S	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-Strike03T401	The pigment manufacturing process, including the following equipment: Strike tank 03T401 – controlled by caustic scrubber (ID # 03S7110) Feed Tank Group A – controlled by caustic scrubber (ID # 03S7010) 03T200 – Sulfate 03T201 – Miscellaneous 03T202 – Solution 03T204 – Acetic 03T205 – Sodium Nitrite 03T206 – Hydrochloric Acid 03T207 – Caustic 03T209 – Calcium 03T215 – Sodium Nitrite (Quick Drop) 03T216 – Hydrochloric Acid (Quick Drop) 03T217 – Caustic 03T227 – Dilute Caustic 03T235 – Sodium Nitrite 03T301 – Rosin 03T302 – Amine / Tobias Acid Dissolver (as needed) – controlled by absolute filter (ID # 03F3020) 03T311 – Coupler	FG-Azo
EU-Strike03T411	The pigment manufacturing process, including the following equipment: Strike tank 03T411 – controlled by caustic scrubber (ID # 03S7110) Feed Tank Group B – controlled by caustic scrubber (ID # 03S7010) 03T200 – Sulfate 03T201 – Miscellaneous 03T202 – Solution 03T204 – Acetic 03T205 – Sodium Nitrite 03T206 – Hydrochloric Acid 03T207 – Caustic 03T209 – Calcium 03T217 – Caustic 03T225 – Sodium Nitrite (Quick Drop) 03T226 – Hydrochloric Acid (Quick Drop) 03T227 – Dilute Caustic 03T235 – Sodium Nitrite 03T301 – Rosin 03T302 – Amine / Tobias Acid Dissolver (as needed) – controlled by absolute filter (ID # 03F3020) 03T311 – Coupler	FG-Azo

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-Strike03T402	The pigment manufacturing process, including the following equipment: Strike tank 03T402 – controlled by caustic scrubber (ID # 03S7110) Feed Tank Group C – controlled by caustic scrubber (ID # 03S7010) 03T200 – Sulfate 03T205 – Sodium Nitrite 03T206 – Hydrochloric Acid 03T207 – Caustic 03T211 – Rosin 03T212 – Solution 03T214 – Acetic 03T217 – Caustic 03T221 – Dilute Caustic 03T222 – Dilute Acetic 03T232 – Miscellaneous 03T233 – Amine 03T235 – Sodium Nitrite 03T236 – Hydrochloric Acid 03T312 – Tetrazo 03T321 – Arylide	FG-Azo
EU-Strike03T412	The pigment manufacturing process, including the following equipment: Strike tank 03T412 – controlled by caustic scrubber (ID # 03S7110) Feed Tank Group C – controlled by caustic scrubber (ID # 03S7010) 03T200 – Sulfate 03T205 – Sodium Nitrite 03T206 – Hydrochloric Acid 03T207 – Caustic 03T211 – Rosin 03T212 – Solution 03T214 – Acetic 03T217 – Caustic 03T221 – Dilute Caustic 03T222 – Dilute Acetic 03T232 – Miscellaneous 03T233 – Amine 03T235 – Sodium Nitrite 03T236 – Hydrochloric Acid 03T312 – Tetrazo 03T321 – Arylide	FG-Azo
EU-RsnCrusher	Rosin Crusher – controlled by caustic scrubber (ID # 03S7010).	FG-Azo
EU-RedSlryTnk	03T901 - Red Slurry Hold Tank – controlled by caustic scrubber (ID # 03S7110).	FG-Azo
EU-Weigh01	The pigment manufacturing process, including the following equipment: Materials Weigh-Up Station – controlled by a coarse filter (ID # 02F7010) and caustic scrubber (ID # 02S7010)	FG-Main
EU-Weigh02	The pigment manufacturing process, including the following equipment: Materials Weigh-Up Station – controlled by an absolute filter (ID # 03F3020) and caustic scrubber (ID # 03S7010)	FG-Azo

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-Weigh03	The pigment manufacturing process, including the following equipment: Materials Weigh-Up Station – controlled by a coarse filter (ID # 02F7010) and caustic scrubber (ID # 02S7010)	FG-Main
EU-Strike01T401	The pigment manufacturing process, including the following equipment: Strike tank 01T401 – controlled by caustic scrubber (ID # 02S7110) Feed Tank Group D – controlled by caustic scrubber (ID # 02S7010) 01T201 – Miscellaneous 01T202 – Dilute Caustic 01T203 – Miscellaneous 01T204 – Acetic 01T206 – Hydrochloric Acid 01T212 – Dilute Acetic 01T213 – Miscellaneous 01T214 – Acetic 01T301 – Arylide 01T302 – Tetrazo or Diazo 01T304 – Tetrazo or Diazo 01T304A – Pre-Coat Tank (SuperCell) 01T311 – Arylide	FG-Main
EU-Strike01T411	The pigment manufacturing process, including the following equipment: Strike tank 01T411 – controlled by caustic scrubber (ID # 02S7110) Feed Tank Group D – controlled by caustic scrubber (ID # 02S7010) 01T201 – Miscellaneous 01T202 – Dilute Caustic 01T203 – Miscellaneous 01T204 – Acetic 01T206 – Hydrochloric Acid 01T212 – Dilute Acetic 01T213 – Miscellaneous 01T214 – Acetic 01T301 – Arylide 01T302 – Tetrazo or Diazo 01T304 – Tetrazo or Diazo 01T304A – Pre-Coat Tank (SuperCell) 01T311 – Arylide	FG-Main

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-Strike01T421	The pigment manufacturing process, including the following equipment: Strike tank 01T421 – controlled by caustic scrubber (ID # 02S7110) Feed Tank Group D – controlled by caustic scrubber (ID # 02S7010) 01T201 – Miscellaneous 01T202 – Dilute Caustic 01T203 – Miscellaneous 01T204 – Acetic 01T206 – Hydrochloric Acid 01T212 – Dilute Acetic 01T213 – Miscellaneous 01T214 – Acetic 01T301 – Arylide 01T302 – Tetrazo or Diazo 01T304 – Tetrazo or Diazo 01T304A – Pre-Coat Tank (SuperCell) 01T311 – Arylide	FG-Main
EU-Strike02T401	The pigment manufacturing process, including the following equipment: Strike tank 02T401 – controlled by caustic scrubber (ID # 02S7110) Feed Tank Group E – controlled by caustic scrubber (ID # 02S7010) and coarse filter (ID # 02F7010) 02T201 – Slurry Rework 02T202 – Rosin 02T203 – Miscellaneous 02T206 – Hydrochloric Acid 02T207 – Caustic 02T301 – Coupler 02T302 – Amine / Tobias Acid Dissolver (as needed) controlled by absolute filter (ID # 02AF3020) 02T315 – Sodium Nitrite	FG-Main
EU-Strike02T411	The pigment manufacturing process, including the following equipment: Strike tank 02T411 – controlled by caustic scrubber (ID # 02S7110) Feed Tank Group E – controlled by caustic scrubber (ID # 02S7010) and coarse filter (ID # 02F7010) 02T201 – Slurry Rework 02T202 – Rosin 02T203 – Miscellaneous 02T206 – Hydrochloric Acid 02T207 – Caustic 02T301 – Coupler 02T302 – Amine / Tobias Acid Dissolver (as needed) controlled by absolute filter (ID # 02AF3020) 02T315 – Sodium Nitrite	FG-Main
EU-Tank05T104N	Storage tank in the tank farm used to store 56% acetic acid, with nominal capacity of 10,000 gallons – controlled by caustic scrubber (ID # 02S7010)	FG-Main
EU-Tank05T104S	Storage tank in the tank farm used to store 56% acetic acid, with nominal capacity of 10,000 gallons – controlled by caustic scrubber (ID # 02S7010)	FG-Main

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-Tank05T106	Storage tank in the tank farm used to store hydrochloric acid, with nominal capacity of 10,000 gallons – controlled by caustic scrubber (ID # 02S7010)	FG-Main
EU-Tank05T116	Storage tank in the tank farm used to store hydrochloric acid, with nominal capacity of 10,000 gallons – controlled by caustic scrubber (ID # 02S7010)	FG-Main
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.		

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-Azo	The AZO pigment manufacturing process, including associated tanks and other equipment servicing red & yellow pigment processing and strike tanks.	EU-Strike03T401, EU-Strike03T411, EU-Strike03T402, EU-Strike03T412, EU-RsnCrusher, EU-RedSlryTnk, EU-Weigh02
FG-MAIN	The MAIN pigment manufacturing process, including associated tanks and other equipment servicing red & yellow pigment processing and strike tanks.	EU-Weigh01, EU-Weigh03, EU-Strike01T401, EU-Strike01T411, EU-Strike01T402, EU-Strike02T401, EU-Strike02T411, EU-Tank05T104N, EU-Tank05T104S, EU-Tank05T106, EU-Tank05T116
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

The following conditions apply to: FG-Azo

DESCRIPTION: The AZO pigment manufacturing process, including associated tanks and other equipment servicing red & yellow pigment processing and strike tanks.

Emission Units: EU-Strike03T401, EU-Strike03T411, EU-Strike03T402, EU-Strike03T412, EU-Weigh02, EU-RsnCrusher, EU-RedStryTnk

POLLUTION CONTROL EQUIPMENT:

Absolute Filter ID #s:
03F3020

Caustic Scrubber ID #s:
03S7010
03S7110

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis	Test protocol*	Equipment in FG-Azo exhausting to SV-Stack01	GC 13	R 336.1331
2. Beta-naphthylamine (BNA)	0.33 microgram per cubic meter, corrected to 70°F and 29.92 inches Hg ¹	Test protocol*	Equipment in FG-Azo exhausting to SV-Stack01	GC 13	R 336.1225
3. Hydrogen chloride (HCl)	3.88 micrograms per cubic meter, corrected to 70°F and 29.92 inches Hg ¹	Test protocol*	Equipment in FG-Azo exhausting to SV-Stack01	GC 13	R 336.1225
4. Hydrogen chloride (HCl)	0.52 micrograms per cubic meter, corrected to 70°F and 29.92 inches Hg ¹	Test protocol*	Equipment in FG-Azo exhausting to SV-Stack02	GC 13	R 336.1225
5. Visible Emissions	0% opacity ^A	6-minute average	Equipment in FG-AZO exhausting to SV-Stack01 and SV-Stack02	SC VI.3	R 336.1301

^A Except for uncombined water vapor
* Test protocol shall specify averaging time

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Red Pigment	12,500,000 lbs pigment processed through the strike tanks per year	12-month rolling time period as determined at the end of each calendar month	FG-Azo	SC VI.4	R 336.1224, R 336.1702(a)

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
2. Yellow Pigment	18,500,000 lbs pigment processed through the strike tanks per year	12-month rolling time period as determined at the end of each calendar month	FG-Azo	SC VI.5	R 336.1224, R 336.1702(a)
3. BNA content of tobias acid used	0.1% by weight ¹	Instantaneous	FG-Azo	SC VI.2	R 336.1224, R 336.1225

III. PROCESS/OPERATIONAL RESTRICTIONS

- Whenever the 3,3'-dichlorobenzidine (DCB) content for any batch of diarylide yellow product exceeds 0.5% by weight, the permittee shall immediately shutdown all process equipment used in producing yellow toner. Operation of this equipment shall not recommence unless approval has been granted by the Air Quality Division. Such approval shall be granted only if the applicant has demonstrated to the satisfaction of the Air Quality Division that the cause of this occurrence has been identified and that processes have been implemented to prevent any such further occurrence.¹ **(R 336.1224, R 336.1225)**
- The permittee shall dispose of empty tobias acid bags and empty color containers by placing them into a container inside the building before ultimate disposal.¹ **(R 336.1224, R 336.1225)**
- The permittee shall not operate FG-Azo unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-Azo, has been submitted within 60 days of permit issuance, 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

- The permittee shall equip and maintain each scrubber in FG-Azo with a liquid flow indicator and a malfunction alarm system. **(R 336.1910)**
- The permittee shall equip and maintain absolute filter (ID # 03F3020) with a pressure sensor with an audio alarm that sounds when the pressure drop is outside of the range specified in the MAP. **(R 336.1910)**
- The permittee shall not operate the equipment in the table below unless the associated control device is installed, maintained, and operated in a satisfactory manner:

Equipment:	Control Device	Stack ID#
a. All tanks in Feed Tank Group A, All tanks in Feed Tank Group B, All tanks in Feed Tank Group C EU-RsnCrusher, EU-Weigh02	Caustic Scrubber (ID # 03S7010)	SV-Stack01
b. Strike tank 03T401, Strike tank 03T411, Strike tank 03T402, Strike tank 03T412, EU-RedSlryTnk	Caustic Scrubber (ID # 03S7110)	SV-Stack02

Satisfactory operation includes maintaining operating parameters within the ranges specified in the MAP. **(R 336.1331, R 336.1910)**

4. The permittee shall not operate tank ID # 03T302 as a tobias acid dissolver vessel unless the absolute filter (ID # 03F3020) is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters within the ranges specified in the malfunction abatement plan. **(R 336.1224, R 336.1225, R 336.1910)**
5. The permittee shall not handle tobias acid in EU-Weigh02 unless the absolute filter (ID # 03F3020) is 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 336.1331, R 336.1910)**
6. The permittee shall not operate strike tanks (ID #s 03T401, 03T411, 03T402, 03T412) unless the caustic scrubber (ID # 03S7110) is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the scrubber includes maintaining the liquid flowrate and the pH within the ranges specified in the approved MAP. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
7. The permittee shall charge raw materials to FG-AZO in a manner that minimizes fugitive air contaminant emissions. **(R 336.1331, R 336.1702(a))**
8. 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 verify the DCB content of diarylide yellow product from FG-Azo by testing at owner's expense, in accordance with Department requirements, on a quarterly basis. The permittee shall keep a record of the results of the testing and make the record available to the AQD upon request. The permittee shall perform four consecutive quarterly readings of the DCB content of diarylide yellow product. 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 obtain from its suppliers of tobias acid the results of the supplier's analysis of the BNA content of the tobias acid. The permittee shall keep a record of the data received from suppliers and shall make the record available to the AQD upon request. If requested by the AQD, the permittee shall also verify the supplier's analytical data concerning the BNA content of tobias acid by analyzing one lot of tobias acid.¹ **(R 336.1225)**
3. 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. Liquid flowrate and pH for the caustic scrubber (ID # 03S7010)
 - b. Liquid flowrate and pH for the caustic scrubber (ID # 03S7110)
 - c. Pressure drop across the absolute filter (ID # 03F3020)The permittee shall keep these records on file at the facility and make them available to the AQD upon request. **(R 336.1910)**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of Red Pigment processed through the strike tanks in FG-Azo. The permittee shall keep all records on file at the facility and make them available to the AQD upon request. **(R 336.1224, R 336.1702(a))**

5. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of Yellow Pigment processed through the strike tanks in FG-Azo. The permittee shall keep all records on file at the facility and make them available to the AQD upon request. **(R 336.1224, R 336.1702(a))**

VII. REPORTING

1. Whenever the DCB content for any batch of diarylide yellow product exceeds 0.1% by weight, the permittee shall immediately notify the AQD District Supervisor, and within 30 days submit the following to the AQD District Supervisor¹:
- a. A written report identifying the cause of the high concentration of DCB¹; and
 - b. A program, acceptable to the AQD District Supervisor, outlining procedures to be implemented to prevent further such occurrences.¹
- (R 336.1224, R 336.1225)**

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-Stack01	Not restricted	65	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV-Stack02	Not restricted	65	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-Main

DESCRIPTION: The MAIN pigment manufacturing process, including associated tanks and other equipment servicing red & yellow pigment processing and strike tanks.

Emission Units: EU-Weigh01, EU-Weigh03, EU-Strike01T401, EU-Strike01T411, EU-Strike01T402, EU-Strike02T401, EU-Strike02T411, EU-Tank05T104N, EU-Tank05T104S, EU-Tank05T106, EU-Tank05T116

POLLUTION CONTROL EQUIPMENT:

Air Filters:
02F7010 (coarse filter)
02AF3020 (absolute filter)
Caustic scrubber ID #s:
02S7010
02S7110

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis	Test Protocol*	Equipment in FG-Main exhausting to SV-Stack09 and SV-Stack10	GC 13	R 336.1331
2. 3-amino-naphthalene-2,7-disulfonic acid	0.4 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
3. 1-amino-naphthalene-2-sulfonic acid	0.4 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
4. 2-naphthyl-amine-3,6-disulfonic acid	0.4 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
5. 2-naphthyl-amine-6-sulfonic acid, sodium salt	0.4 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
6. Beta-naphthyl-amine (BNA)	0.33 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
7. Benzene sulfonic acid	0.4 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
8. 3,3'-Dichloro-benzidine (DCB)	0.01 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
9. Dichloro-biphenyl	0.2 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
10. Dimethoxy-benzidine (DMB)	0.01 micrograms per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
11. Hydrogen chloride (HCl)	0.26 lb per hour ¹	Test Protocol*	Equipment in FG-Main exhausting to Scrubber ID # 02S7010	GC 13	R 336.1225

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
12. HCl	0.37 lb per hour ¹	Test Protocol*	Equipment in FG-Main exhausting to Scrubber ID # 02S7110	GC 13	R 336.1225
13. Sulfamic acid	0.16 milligrams per cubic meter ^{A,1}	Test Protocol*	FG-Main	GC 13	R 336.1225
14. Visible Emissions	0% opacity ^B	6-minute average	Equipment in FG-Main exhausting to SV-Stack09 and SV-Stack10	SC VI.3	R 336.1301

^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

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Red pigment	5,000,000 lbs pigment processed through the strike tanks per year	12-month rolling time period as determined at the end of each calendar month	FG-Main	SC VI.4	R 336.1224, R 336.1702(a)
2. BNA content of tobias acid used	0.1% by weight ¹	At any time	FG-Main	SC VI.2	R 336.1224, R 336.1225

III. PROCESS/OPERATIONAL RESTRICTIONS

- Whenever the 3,3'-dichlorobenzidine (DCB) content for any batch of diarylide yellow pigment exceeds 0.5% by weight, the permittee shall immediately shutdown all process equipment used in producing yellow pigment. Operation of this equipment shall not recommence unless approval has been granted by the Air Quality Division. Such approval shall be granted only if the applicant has demonstrated to the satisfaction of the Air Quality Division that the cause of this occurrence has been identified and that processes have been implemented to prevent any such further occurrence.¹ (R 336.1224, R 336.1225)
- The permittee shall dispose of empty tobias acid bags and empty color containers by placing them into containers inside the building before ultimate disposal.¹ (R 336.1224, R 336.1225)
- The permittee shall not operate FG-Main unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for FG-Main, has been submitted within 60 days of permit issuance, 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 equipment in the table below unless the associated control device is installed, maintained, and operated in a satisfactory manner:

	Equipment:	Control Device(s)	Stack ID #
a.	All tanks in Feed Tank Group E, EU-Weigh01, EU-Weigh03	Filter (ID # 02F7010)	SV-Stack10
b.	All tanks in Feed Tank Group D, All tanks in Feed Tank Group E, EU-Tank05T104N, EU-Tank05T104S, EU-Tank05T106, EU-Tank05T116, EU-Weigh01, EU-Weigh03	Caustic scrubber (ID # 02S7010)	SV-Stack10
c.	Strike Tank 01T401, Strike Tank 01T411, Strike Tank 01T421, Strike Tank 02T401, Strike Tank 02T411	Caustic scrubber (ID # 02S7110)	SV-Stack09

Satisfactory operation includes maintaining operating parameters within the ranges specified in the MAP. **(R 336.1331, R 336.1910)**

2. The permittee shall not operate tank ID # 02T302 as a tobas acid dissolver vessel unless the absolute filter (ID # 02AF3020) is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1910)**
3. The permittee shall charge raw materials to FG-Main in a manner that minimizes fugitive air contaminant emissions. **(R 336.1331, R 336.1702(a))**
4. The permittee shall equip and maintain the caustic scrubbers (ID #s 02S7010, 02S7110) with liquid flow indication systems. **(R 336.1910)**
5. 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 verify the DCB content of diarylide yellow product from FG-Main by testing at owner's expense, in accordance with Department requirements, on a quarterly basis. The permittee shall keep a record of the results of the testing and make the record available to the AQD upon request. The permittee shall perform four consecutive quarterly readings of the DCB content of diarylide yellow product. 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 obtain from its suppliers of tobas acid the results of the supplier's analysis of the BNA content of the tobas acid. The permittee shall keep a record of the data received from suppliers and shall make the record available to the AQD upon request. If requested by the AQD, the permittee shall also verify the supplier's analytical data concerning the BNA content of tobas acid by analyzing one lot of tobas acid.¹ **(R 336.1225)**

3. 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. Liquid flowrate and pH for the caustic scrubber (ID # 02S7010)
 - b. Liquid flowrate and pH for the caustic scrubber (ID # 02S7110)
 - c. Pressure drop across the absolute filter (ID # 02AF3020)
 - d. Pressure drop across the coarse filter (ID # 02F7010)
- The permittee shall keep these records on file at the facility and make them available to the AQD upon request. **(R 336.1910)**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of Red Pigment processed through strike tanks in FG-Main. The permittee shall keep all records on file at the facility and make them available to the AQD upon request. **(R 336.1224, R 336.1702(a))**

VII. REPORTING

1. Whenever the DCB content for any diarylide yellow batch exceeds 0.1% by weight, the permittee shall immediately notify the AQD District Supervisor, and within 30 days submit all of the following to the AQD District Supervisor.¹
- a. A written report identifying the cause of the high concentration of DCB;¹
 - b. A program, acceptable to the AQD District Supervisor, outlining procedures to be implemented to prevent further such occurrences.¹
- (R 336.1224, R 336.1225)**

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-Stack09*	Not restricted	Not restricted	NA
2. SV-Stack10	24	77	R 336.1225, 40 CFR 52.21(c)&(d)
* Not required to discharge exhaust gases unobstructed vertically upwards.			

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply Source-Wide to: FGFACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Aggregate HAPs	Less than 25 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)
2. Each individual HAP	Less than 10 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)

II. MATERIAL LIMITS

No additional requirements

III. PROCESS/OPERATIONAL RESTRICTIONS

No additional requirements

IV. DESIGN/EQUIPMENT PARAMETERS

No additional requirements

V. TESTING/SAMPLING

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

No additional requirements

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period individual HAP and total HAP emission calculations to demonstrate compliance with the limits in SC I.1 and SC I.2. These calculations shall be based upon emission test results or emission factors; and records of production rate, hours of operation, or fuel usage, as appropriate. The permittee shall keep all records on file and make them available to the AQD upon request. **(R 336.1205(1))**

VII. REPORTING

No additional requirements

VIII. STACK/VENT RESTRICTIONS

No additional requirements

IX. OTHER REQUIREMENTS

No additional requirements

Footnotes:

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

AQD No. 42-2014

Exhibit E

Permit No. 156-13

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 ₂ e	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 ₂ S	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 # 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 # 01BH802, 01BH812), and pack-out baggers (ID # 01U802 and 01U812). This operation is equipped with control devices of dust collection baghouse (ID # 01BH811) and filters (ID # 01AF802, 01AF812, 01AF811).	FG-Blend
EU-EirichDryer	A rotary vacuum dryer (ID # 06D633) used in pigment processing, equipped with a dust collection baghouse (ID # 06BH633) and a condenser (ID # 06E633). Emissions from pack-out of the dryer 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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
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-EirichDryer

DESCRIPTION: A rotary vacuum dryer (ID # 06D633) used in pigment processing equipped with a dust collection baghouse (ID # 06BH633), a condenser (ID # 06E633). Emissions from pack-out of the dryer are controlled by a pack-out baghouse (ID # 06BH634).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT:

Baghouse ID #s:
 06BH633 - air pollution control (exhaust to SV-Stack31)
 06BH634 - air pollution control for pack-out (exhaust in room)
 Condenser ID #:
 06E633

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-EirichDryer	GC 13	R 336.1331
2. Visible Emissions	5% opacity ^A	6-minute average	EU-EirichDryer	SC VI.1	R 336.1301 R 336.1331
^A Except for uncombined water vapor * Test protocol shall specify averaging time.					

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall not operate EU-EirichDryer unless an amended malfunction abatement plan (MAP) as described in Rule 911(2), for EU-EirichDryer, 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

- The permittee shall equip and maintain the baghouse with a pressure differential gauge and a particle detection instrument. **(R 336.1910)**

2. The permittee shall not operate EU-EirichDryer unless the following equipment is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining operating parameters within the ranges specified in the MAP.
 - a. Condenser (ID # 06E633) **(R 336.1225, R 336.1910)**
 - b. Baghouse (ID # 06BH633) **(R 336.1331, R 336.1910)**
 - c. Packout Baghouse (ID # 06BH634) **(R 336.1331, 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 MAP at the frequency specified in the MAP:
 - a. Cooling water outlet temperature for condenser (ID # 06E633)
 - b. Pressure drop across baghouse (ID # 06BH633)
 - c. Particle detection for baghouse (ID # 06BH633)
 - d. Pressure drop across pack-out baghouse (ID # 06BH634)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-Stack31	4 ¹	42.6 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This 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 V.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

- 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:

¹This 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:

¹This 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

- 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:

¹This 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

- 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

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

¹This 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:

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