

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

January 19, 2024

PERMIT TO INSTALL
85-961

ISSUED TO
Sensient Flavors, LLC

LOCATED AT
79 State Street
Harbor Beach, Michigan 48441

IN THE COUNTY OF
Huron

STATE REGISTRATION NUMBER
B1633

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: September 19, 2023	
DATE PERMIT TO INSTALL APPROVED: January 19, 2024	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 condition 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT 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 (Including Process Equipment & Control Device(s))	Flexible Group ID
EUHVPREACTORS	HVP reactors are vented to a packed bed scrubber system for control (HVP Reactor Room Scrubber).	FGHVPHCLNEUHTA
EUNEUTANKS	Two neutralization tanks, an HVP tank and casein hydrolysate still are vented to a packed bed scrubber system for control (Neutralization Tank Scrubber).	FGHVPHCLNEUHTA
EUHCLLAHTANKS	Hydrochloric acid tanks and the LAH tanks. These tanks can be vented to either packed bed scrubber system for control (Neutralization Tank Scrubber or HVP Reactor Room Scrubber).	FGHVPHCLNEUHTA
EUHTA1	Heat-treated deammonization (HTA) adjustment tanks that are vented to a scrubber system for control (HTASCRBR)	FGHVPHCLNEUHTA
EUHTA2	HTA treatment tanks (two 8,000 gallon tanks) and a new 4,000 gallon cook tank that are vented to a new packed bed scrubber system for control (HTASCRBR2)	FGHVPHCLNEUHTA
EUGRAINDC1	Grain unloading. Controlled by a dust collector.	FGGRAINSODA
EUGRAINDC2	Grain Silo filling. Controlled by a dust collector.	FGGRAINSODA
EUGRAINDC3	Grain Silo filling. Controlled by a dust collector.	FGGRAINSODA
EUGRAINDC4	Grain transfer to reactors. Controlled by a dust collector.	FGGRAINSODA
EUGRAINDC5	Closed loop carbon treatment system. Controlled by a high-efficiency baghouse.	NA
EUSODADC1	Soda ash transfer. Controlled by a dust collector.	FGGRAINSODA
EUSAVFLAVREACT	Savory flavors reactions process, consisting of six (6) mixing/reactor vessels and associated process tanks. The process is vented to a packed bed scrubber for H2S removal.	FGSAVFLAV
EUSAVFLAVLGDRY	Large spray dryer associated with savory flavors production. The dryer is vented to a cyclone to capture product, then to a venturi scrubber with a mist eliminator for particulate removal.	FGSAVFLAV
EUINTTANK1	Intermediate tank for holding raw material.	FGSAVFLAV
EUINTTANK2	Intermediate tank for holding raw material.	FGSAVFLAV
EUBLENDERB	Product blending tank B	FGBLENDERS
EUBLENDERC	Product blending tank C	FGBLENDERS
EUBLENDERN	Product blending tank N	FGBLENDERS
EUBLENDERS	Product blending tank S	FGBLENDERS

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 336.1291.

FLEXIBLE GROUP SPECIAL CONDITIONS

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
FGHVPHCLNEUHTA	HVP reactors, neutralization tanks, LAH tanks, hydrochloric acid tanks, HVP tank, the casein hydrolysate still, HTA adjustment tanks, HTA cook tank and HTA treatment tanks. All processes are vented to one of four scrubber systems.	EUHVPREACTORS, EUNEUTANKS, EUHCLAHTANKS, EUHTA1, EUHTA2
FGGRAINSODA	Grain handling (including storage silos) and soda ash transfer processes.	EUGRAINDC1, EUGRAINDC2, EUGRAINDC3, EUGRAINDC4, EUSODADC1
FGSAVFLAV	Savory flavors production process consisting of reactions process and large spray dryer. The reactions process is vented to a packed bed scrubber, and the spray dryer is vented to a cyclone to capture product, then to a venturi scrubber with a mist eliminator for particulate removal.	EUSAVFLAVREACT, EUSAVFLAVLGDRY, EUINTTANK1, EUINTTANK2
FGBLENDERS	Product blending equipment controlled by two whirlwet scrubbers.	EUBLENDERB, EUBLENDERC, EUBLENDERN, EUBLENDERS

**FGHVPHCLNEUHTA
EMISSION UNIT CONDITIONS**

DESCRIPTION

HVP reactors, neutralization tanks, LAH tanks, hydrochloric acid tanks, HVP tank, the casein hydrolysate still, HTA adjustment tanks, HTA cook tank and HTA Storage tanks. All processes are vented to one of four scrubber systems.

Emission Unit: EUHVPREACTORS, EUNEUTANKS, EUHCLLAHTANKS, EUHTA1, EUHTA2

POLLUTION CONTROL EQUIPMENT

HVP Reactor Room Scrubber, Neutralization Tank Scrubber, HTA1 Scrubber, and HTA2 Scrubber systems

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any process in FGHVPHCLNEUHTA unless a revised malfunction abatement plan (MAP) as described in Rule 911(2), for each of the packed bed scrubber systems in FGHVPHCLNEUHTA, has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the position title responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 90 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 336.1225, R 336.1910, R 336.1911)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUHVPREACTORS unless the HVP reactor room packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining a minimum scrubber liquid flow rate of 30 gallons per minute, a pH level at or above 6.0, and a maximum differential pressure of 6.0 inches water column. (R 336.1224, R 336.1225, R 336.1910)

2. The permittee shall not operate EUNEUTANKS unless the neutralization tank packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining a minimum scrubber liquid flow rate of 8.0 gallons per minute, a pH level at or above 6.0, and a maximum differential pressure of 6.0 inches water column. **(R 336.1224, R 336.1225, R 336.1910)**
3. The permittee shall not operate EUHCLAHTANKS unless the neutralization tank packed bed scrubber system or the HVP reactor room packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining a minimum scrubber liquid flow rate, pH level and a maximum differential pressure as specified in SC IV.1 and IV.2 for each scrubber system. **(R 336.1224, R 336.1225, R 336.1910)**
4. The permittee shall not operate EUHTA1 unless the HTA1 scrubber system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining a minimum scrubber liquid flow rate of 37 gallons per minute and a maximum differential pressure of 2 inches water column. **(R 336.1224, R 336.1225, R 336.1910)**
5. The permittee shall not operate EUHTA2 unless the HTA2 packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining a minimum scrubber liquid flow rate of 20 gallons per minute, a pH level at or above 5, and a maximum differential pressure of 6 inches water column. **(R 336.1224, R 336.1225, R 336.1910)**
6. The permittee shall equip and maintain each packed bed scrubber system in FGHVPHCLNEUHTA with a liquid flow rate indicator, pH indicator, and a differential pressure gauge. **(R 336.1224, R 336.1225, R 336.1910)**

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, in a satisfactory manner, the liquid flow rate, pH and pressure drop of each scrubber system in FGHVPHCLNEUHTA on a daily basis. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall keep, in a satisfactory manner, daily records of the pressure drop, liquid flow rate and pH level for each scrubber system in FGHVPHCLNEUHTA, as specified in SC IV.1 through 5. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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. SVHVPSCRBR	12	75	R 336.1225
2. SVNEUSCRBR	8	65	R 336.1225
3. SVHTASCRBR1	4	70	R 336.1225

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SVHTASCRBR2	12	32	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FGGRAINSODA FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Grain handling (including storage silos) and soda ash transfer processes.

Emission Unit: EUGRAINDC1, EUGRAINDC2, EUGRAINDC3, EUGRAINDC4, EUSODADC1

POLLUTION CONTROL EQUIPMENT

Each process is controlled by a dust collector.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any process in FGGRAINSODA unless a malfunction abatement plan (MAP) as described in Rule 911(2), for each of the dust collector systems in FGGRAINSODA, has been submitted, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the position title responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 90 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 336.1225, R 336.1331, R 336.1910, R 336.1911)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any process in FGGRAINSODA unless the associated dust collector system is installed, maintained, and operated in a satisfactory manner. Proper operation includes but is not limited to maintaining the pressure drop across each system as specified by the manufacturer or changing out the bags on a regular basis, as specified by the manufacturer. The pressure drop range and/or bag change out schedule shall be included in the MAP required by SC III.1. (R 336.1224, R 336.1225, R 336.1331, R 336.1910)

- The permittee shall equip and maintain each dust collector system in FGGRAINSODA with a differential pressure gauge if monitoring the pressure drop is the method of compliance specified in the MAP required by SC III.1. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910)**

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))**

- The permittee shall monitor, in a satisfactory manner, the pressure drop of each dust collector system in FGGRAINSODA on a weekly basis, as applicable. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910)**
- The permittee shall keep, in a satisfactory manner, weekly records of the pressure drop readings for each dust collector system in FGGRAINSODA. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1331, R 336.1910)**
- The permittee shall keep, in a satisfactory manner, records of the dates and times of when the bags are changed out in the bin vents in FGGRAINSODA. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1331, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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. SVGDC1(side discharge)	18 x 18	10	R 336.1225, R 336.1331
2. SVGDC2 (Bin Vent, top of silo)	24 x 12	70	R 336.1225, R 336.1331
3. SVGDC3 (Bin Vent, top of silo)	24 x 12	70	R 336.1225, R 336.1331
4. SVGDC4	36 x 36	65	R 336.1225, R 336.1331
5. SVSADC1	8	75	R 336.1225, R 336.1331

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

**FGSAVFLAV
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Savory flavors production process consisting of reactions process and large spray dryer. The reactions process is vented to a packed bed scrubber, and the spray dryer is vented to a cyclone to capture product, then to a venturi scrubber with a mist eliminator for particulate removal.

Emission Unit: EUSAVFLAVREACT, EUSAVFLAVLGDRY, EUINTTANK1, EUINTTANK2

POLLUTION CONTROL EQUIPMENT

The reactions process is vented to a packed bed scrubber, and the spray dryer is vented to a venturi scrubber with a mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.40 tpy	12-month rolling time period as determined at the end of each calendar month	EUSAVFLAVLGDRY	SC VI.4	R 336.1702(a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Savory and Flavor product	1,752,000 lb/yr	12-month rolling time period as determined at the end of each calendar month	EUSAVFLAVLGDRY	SC VI.3	R 336.1205(1)(a) and (3), R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any process in FGSAVFLAV unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the packed bed scrubber and the venturi scrubber, has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the position title responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

- d) For the packed bed scrubber, the MAP shall include the acceptable ranges of operating parameters that must be achieved in order to maintain an H₂S removal efficiency of 99.9 percent, including, but not limited to the following:
 - i) Minimum liquid flow rate
 - ii) Maximum and minimum pH
 - iii) Maximum and minimum differential pressure across the packed bed tower
- e) For the venturi scrubber and mist eliminator, the MAP shall include the acceptable ranges of operating parameters that must be achieved in order to maintain a PM₁₀ removal efficiency of 99.5 percent, including, but not limited to the following:
 - i) Minimum liquid flow rate
 - ii) Maximum and minimum differential pressure across the venturi

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction for either scrubber, 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 90 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 336.1225, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any process in EUSAVFLAVREACT unless the packed bed scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the packed bed scrubber includes operating according to the parameters specified in the MAP. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall not operate EUSAVFLAVLGDRY unless the venturi scrubber and mist eliminator are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the venturi scrubber includes operating according to the parameters specified in the MAP. **(R 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**
3. The permittee shall equip and maintain FGSAVFLAV with all of the following:
 - a) A liquid flow rate indicator for both the packed bed scrubber tower and the venturi,
 - b) A pH indicator for the packed bed scrubber tower,
 - c) A differential pressure gauge for both the scrubber tower and the venturi.**(R 336.1224, R 336.1225, R 336.1910)**

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 parameters for FGSAVFLAV on a daily basis:
 - a) Liquid flow rate, pH, and pressure drop of the packed bed scrubber
 - b) Liquid flow rate, pH, and pressure drop of the venturi scrubber

The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21 (c) and (d))**

2. 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 336.1201, R 336.1205, R 336.1225, R 336.1702(a))**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of product dried in EUSAVFLAVLGDRY, as required by SC II.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21 (c) and (d))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUSAVFLAVLGDRY, as required by SC I.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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-PACKEDSCRB	12	38	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV-VENTURISCRB	14 x 18	38	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FGBLENDERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Product blending equipment controlled by two whirlwet scrubbers.

Emission Unit: EUBLENDERB, EUBLENDERC, EUBLENDERN, EUBLENDERS

POLLUTION CONTROL EQUIPMENT

EUBLENDERB and EUBLENDER C are controlled by whirlwet scrubber #1. EUBLENDERN and EUBLENDERS are controlled by whirlwet scrubber #2.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	1.02 pph	Hourly	EUBLENDERB and EUBLENDERC combined	GC 13	R 336.1331
2. PM	0.48 pph	Hourly	EUBLENDERN and EUBLENDERS combined	GC 13	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any blender in FGBLENDERS unless that blender's scrubber is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1301, R 336.1331)**
2. The permittee shall equip and maintain each scrubber in FGBLENDERS with a gauge which measures the pressure drop across each scrubber. **(R 336.1301, R 336.1331)**

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 acceptable to the AQD District Supervisor, the pressure drop across each scrubber in FGBLENDERS on a daily basis. **(R 336.1301, R 336.1331)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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-SCBR1	8	15	40 CFR 52.21 (c) & (d)
2. SV-SCBR2.	8	15	40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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