

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

October 6, 2016

PERMIT TO INSTALL
85-96H

ISSUED TO
Sensient Flavors, LLC

LOCATED AT
79 State Street
Harbor Beach, Michigan

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: September 29, 2016	
DATE PERMIT TO INSTALL APPROVED: October 6, 2016	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 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
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 (104 lbs/hr capacity of finished product). The dryer is vented to a cyclone to capture product, then to a venturi scrubber with a mist eliminator for particulate removal.	FGSAVFLAV
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
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, EUHCLLAHTANKS, 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

The following conditions apply to:
FGHVPHCLNEUHTA

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 Units: EUHVPREACTORS, EUNEUTANKS, EUHCLLAHTANKS, EUHTA1, EUHTA2

POLLUTION CONTROL EQUIPMENT: HVP Reactor Room Scrubber, Neutralization Tank Scrubber, HTA1 Scrubber, and HTA2 Scrubber systems

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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 PARAMETERS

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 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. SVHVPSCRBR	12	75	R 336.1225
2. SVNEUSCRBR	8	65	R 336.1225
3. SVHTASCRBR1	4	70	R 336.1225
4. SVHTASCRBR2	12	32	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:
FGGRAINSODA

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

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

POLLUTION CONTROL EQUIPMENT: Each process is controlled by a dust collector.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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 PARAMETERS

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)**
2. 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))

1. 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)
2. 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)
3. 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 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. 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 REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
FGSAVFLAV

DESCRIPTION: Savory flavors reactions process and large spray dryer.

Emission Units: EUSAVFLAVREACT, EUSAVFLAVLGDRY

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

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	18.5 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 LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Savory product	290,400 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)
2. Flavor product	237,600 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, R 336.1702(a), 40 CFR 52.21 (c) and (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

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 PARAMETERS

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 and SC II.2. 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 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-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 REQUIREMENTS

NA

Footnotes:

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