# State of New Jersey Department of Environmental Protection Air Quality Permitting

# General Permit (GP-021A) for

## **Indoors Fumigation Operations of Cocoa Bean Products**

This General Permit allows for the construction, installation, reconstruction, modification and operation of:

**Fumigation Operations** in single or multiple industrial structures, limited to indoor tarpaulin enclosure for sulfuryl fluoride fumigation of cocoa bean products.

No other type of fumigation activity is allowed. This General Permit allows fumigation to occur only at the facility where it is issued.

Each facility may possess only one GP-021A at any time. If a facility wants to add additional fumigation units, or make changes to existing GP-021A, then a new General Permit registration is required. This new General Permit registration will supersede the existing General Permit.

#### I. <u>DEFINITIONS</u>

The terms and phrases used in this document shall have the same meaning as in N.J.A.C. 7:27-8, and/or as listed below:

- "Aeration" means that a fumigant is being released from an industrial structure into the atmosphere.
- "Aeration Time" means the total amount of time allotted to release the fumigant from the industrial structure after the fumigation has concluded.
- "Air Pollution Control Apparatus" means any device which prevents or controls the emission of any air contaminant directly or indirectly into the outdoor atmosphere.
- "Cocoa Bean Products" means products derived from cocoa beans, including but not limited to whole cocoa beans, cocoa powder, cocoa cake, and ground cocoa beans.
- "Commodity" means a mass-produced product that can be bought and sold, including agricultural products, produce, logs, vehicles, and clothing. For the purpose of this General Permit, the commodity is cocoa bean products.
- "Department" means the New Jersey Department of Environmental Protection.
- "FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act, which is the Federal statute that governs the registration, distribution, sale, and use of pesticides in the United States.
- "Fumigation Management Plan" means a site-specific plan including the safety plan and site plan, consulted prior to any fumigation activity and in agreement with the fumigant's label.
- "Fumigation" or "Fumigation operation" for the purpose of this General Permit means the use of a fumigant in a sealed, enclosed space to prevent, control, or eliminate pests in stored commodities by treating the commodity. This includes all activities prior to the application of fumigant(s), the fumigation period, and post fumigation activities.
- "Industrial Structure" for the purpose of this General Permit means the fumigation chamber, under a tarp located at an enclosed space inside a warehouse or building, in which fumigation occurs as a significant source operation (N.J.A.C. 7:27-8.2(c)22). "Industrial structure" does not include a private residence, commercial office or commercial building in which fumigation occurs.

- "HAP" or "Hazardous Air Pollutant" means an air contaminant listed in or pursuant to 42 U.S.C. §7412(b).
- "Label" or "labeling" means the instructions and all supplemental documents provided on the EPA label of the fumigant. This includes the specimen label and applicator manual located on the canister of fumigant.
- "Mechanical aeration" means the active emission of a fumigant from the industrial structure to the atmosphere by use of a blower capable of meeting the required stack exit velocity.
- "Modify" or "Modification" means any physical change in, or change in the method of operation of, existing equipment or control apparatus that increases the amount of actual emissions of any air contaminant emitted by that equipment or control apparatus or that results in the emission of any air contaminant not previously emitted. This term shall not include normal repair and maintenance.
- "NJBPC" means New Jersey Bureau of Pesticide Control
- "Potential to Emit" or "PTE" means the maximum aggregate capacity of equipment to emit an air contaminant under its physical and operational design. Equipment-related fugitive emissions shall be included in the determination of potential to emit. For the purpose of this General Permit, physical and operational limitations on the capacity of equipment or the emission of an air contaminant, including any limitation on fugitive emissions as a result of any applicable requirement, control apparatus, and restrictions on hours of operation or on the type or amount of material processed, are not considered part of its design.
- "Reporting Threshold" means the threshold for reporting emissions of air contaminants in accordance with N.J.A.C. 7:27-8, and N.J.A.C. 7:27-17, as applicable.
- "Safety Plan" means the set of instructions and guidelines to protect the applicators and any nearby person from harm due to the use of the fumigant. The safety plan should include all site-specific safety information provided in the fumigant label. The safety plan is a component of the Facility Management Plan.
- "Significant source operation" or "significant source" means a source that is classified as a significant source pursuant to N.J.A.C. 7:27-8.2(c) and that is not exempted from being a significant source pursuant to N.J.A.C. 7:27-8.2(d) or (e).

"Site Plan" means a drawing reflecting the discharge direction, distance to property line from each potential emission point, respective stack heights and diameter, and rated fan capacity or flow rate. The site plan is a component of the Fumigation Management Plan.

"State-of-the-Art (SOTA) Thresholds means an emission rate listed in N.J.A.C. 7:27-17.9.

"Sulfuryl Fluoride" means the inorganic compound with chemical formula SO<sub>2</sub>F<sub>2</sub>. For the purpose of this GP, Sulfuryl Fluoride is the fumigant to be used.

"USDA" means United States Department of Agriculture.

"USA EPA" means the Environmental Protection Agency of the United States federal government whose mission is to protect human and environmental health.

#### II. AUTHORITY

This General Permit is issued under the authority of N.J.S.A. 26:2C-9.2. This General Permit shall allow for inspection and evaluation to assure conformance with all provisions of N.J.A.C. 7:27 et seq. An opportunity for public comment on this General Permit was provided on August 7, 2023.

#### III. APPLICABILITY

This General Permit allows for the construction, installation, reconstruction, modification and operation of:

**Fumigation Operations** in single or multiple industrial structures, limited to tarpaulin enclosure for sulfuryl fluoride fumigation of cocoa bean products.

No other type of fumigation activity is allowed. This General Permit allows fumigation to occur only at the facility where it is issued.

Each facility may possess only one GP-021A at any time. If a facility wants to add additional fumigation units, or make changes to existing GP-021A, then a new General Permit registration is required. This new General Permit registration will supersede the existing General Permit.

#### IV. <u>EXCLUSIONS</u>

This General Permit shall not be used for the following equipment:

- 1. Any equipment for which another specific General Permit has been established pursuant to N.J.A.C. 7:27-8.8;
- 2. Any equipment subject to NSPS, MACT, or NESHAPS requirements;
- 3. Any fumigation operations performed in containers;
- 4. Any outdoors fumigation operations;
- 5. Any fumigation operations using a fumigant other than Sulfuryl Fluoride;
- 6. Any fumigation operations performed in a commodity other than cocoa bean products.
- 7. Any fumigation operations exceeding SOTA thresholds.

#### V. EQUIPMENT / CONTROL / OPERATION SPECIFICATIONS

- All fumigations using sulfuryl fluoride must be done following applicable guidelines issued by the United States Environmental Protection Agency (USEPA) - Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and United States Department of Agriculture (USDA), and New Jersey Bureau of Pesticide Control (NJBPC).
- Upon request of the Department, the Permittee shall have available a Fumigation Management Plan including the instructions on how to address all elements prior to any fumigation activity, as well as the safety plan and site plan, in accordance with the fumigant's label.
- The Permittee shall submit a Site plan at the time of registration showing the discharge direction, the horizontal distance to property line from each potential emission point, respective vertical distance of the stack heights and diameter, and rated fan capacity or flow rate according to the only two conditions/scenarios established in the compliance plan and listed in Table A.

Table A

Scenario	Stack Height	Stack	Minimum flow
	(ft)	Diameter (in)	(ACFM)
#1	Greater than	4	300
	or equal to 18		
	ft		
#2	Greater than	18	5,000
	or equal to 18		
	ft		

- The Sulfuryl Fluoride usage shall not exceed 300 pounds per day; and 9,000 pounds per year. The Permittee shall maintain calculations and recordkeeping as it is required in the compliance plan.
- The Permittee shall maintain records of the manufacturer specifications for each equipment, if available.
- If there is any control device, this shall be operated and maintained in accordance with the manufacturer's specifications and recommendations.

#### VI. POTENTIAL TO EMIT

The Potential to Emit (PTE) for all fumigation operations covered under this General Permit shall be below than or equal to 4.5 tons of Sulfuryl Fluoride per year (9,000 pounds per year).

#### VII. SUBMITTAL / CONTACT INFORMATION

For assistance or contact information, please go to the following resources:

- 1. Air Compliance and Enforcement at: http://www.nj.gov/dep/enforcement/air.html
- 2. Bureau of Stationary Sources at: https://dep.nj.gov/boss/
- 3. Small Business Assistance Program at: http://www.nj.gov/dep/aqes/sbap/index.html

#### VIII. COMPLIANCE PLAN

The Equipment covered by this General Permit is subject to the applicable requirements listed on the following page

#### **COMPLIANCE PLAN: Indoors Fumigation Operations: Sulfuryl Fluoride Cocoa Bean Products**

Ref. #	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
	In addition to this Compliance Plan, all conditions contained in the document "General Procedures for General Permits" posted on the web page <a href="https://dep.nj.gov/boss/general-permits/gp-minor/#how-to-obtain-a-general-permit">https://dep.nj.gov/boss/general-permits/gp-minor/#how-to-obtain-a-general-permit</a> are enforceable.  [N.J.A.C.7:27-8.13(a)]	None.	None.	None.
2	The Permittee shall not operate any fumigation activity in a manner which will cause visible emissions, exclusive of visible condensed water vapor, except for a period of no more than 3 minutes in any consecutive 30-minute period.  [N.J.A.C. 7:27-8.13(a)]	None.		Notify by phone: Upon occurrence of event.  If visible emissions are observed, refer to operator manual for corrective action. If corrective action fails to correct visible emissions within 24 hours of observation, the Permittee shall immediately report the incident to the Department by calling the Environmental Action Hotline at (877) 927- 6337.  [N.J.S.A. 26:2C-19(e)]

3	This fumigation activity shall not cause	None.	None.	Notify by phone: Upon occurrence of
	any air contaminant, including an air			event.
	contaminant detectable by the sense of smell, to be present in the outdoor atmosphere in such quantity and duration which is, or tends to be,			Any operation of the equipment which may cause a release of air contaminants in a quantity or concentration which poses a potential threat to public health, welfare,
	injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the			or the environment or which might result in citizen complaints shall be reported by the Permittee as required by the Air
	enjoyment of life or property, except in areas over which the owner or operator			Pollution Control Act. The Permittee shall immediately notify the Department of any non-compliance by calling the
	has exclusive use or occupancy.  [N.J.A.C. 7:27-5]			Environmental Action Hotline at (877) 927-6337.
				[N.J.S.A. 26:2C-19(e)]

4	Maximum No. of Billable	None.	None.	None.
	Compliance Inspections <= 4			
	inspections. The equipment covered			
	by this permit will be subject to			
	inspection fees for the maximum			
	periodic compliance inspections (as			
	defined in N.J.A.C 7:27-8.1) over the			
	life of the Certificate, after it receives			
	final approval. The Permittee will be			
	invoiced for a service fee per			
	inspection pursuant to N.J.A.C. 7:27-			
	8.6 after the periodic compliance inspection is conducted.			
	[N.J.A.C. 7:27-8.13(e)]			
	[N.J.A.C. 7.27-8.13(e)]			

5	Prepare and implement a site-specific	Monitored by visual determination	Printed copies of the fumigant's	None.
	Fumigation Management Plan (FMP),	once	Applicators Manual, label, and	
	which includes the safety plan and site	initially prior to the release of	FMP must be maintained and	
	plan per Ref#9, prior to any fumigation	fumigant.	available onsite during all	
	activity, in accordance with the		fumigation related activities. The	
	fumigant's label. The certified applicator	[N.J.A.C. 7:27-8.13(d)]	FMP must be made easily	
	supervising the fumigation must verify in		retrievable and available to the	
	writing (sign and date) that the FMP		Department immediately upon	
	reflects current site conditions and		request.	
	addresses all elements identified in the			
	fumigant label.		[N.J.A.C. 7:27-8.13(d)]	
	[N.J.A.C. 7:27-8.13(a)]			

The Permittee shall ensure that the area of fumigation is easily identifiable by clear and conspicuous labeling. The area shall be documented in the facility's Fumigation Management Plan (FMP).  [N.J.A.C. 7:27-8.13(a)]	Monitored by visual determination prior to each fumigation event. If the area of fumigation will be moved, it shall be identified and recorded.  [N.J.A.C. 7:27-8.13(d)]	Recording by manual logging of parameter or storing data in a computer data system per application.  Record the areas of fumigation for each application.  See Reference #16 Recordkeeping Requirement.  [N.J.A.C. 7:27-8.13(d)]	None.

7	All entrances and all sides of the	Manitana I barriana 1 1 de maria di	None.	None.
'	fumigated environment and any	William by Visual determination	[	
	connected area must have warning signs.	prior to each fumigation event.		
	The warehouse shall be clear of people			
	and non-target animals and secured	[N.J.A.C. 7:27-8.13(d)]		
	before fumigation begins. Secure the			
	warehouse against unauthorized entry			
	during the fumigation exposure period.			
	Warning signs must be of weather-			
	resistant material and should be securely			
	affixed to the structure. Do not allow			
	entry by unprotected persons into			
	fumigated area until the signs are			
	removed. Signs must remain legible			
	during the entire posting period. Warning			
	signs should be placed in advance of the			
	fumigation to keep unauthorized persons			
	away.			
	The warning signs must be printed, in			
	English and Spanish, with:			
	- The signal word DANGER/PELIGRO			
	and the SKULL and CROSSBONES			
	symbol in red.			
	- The statement, "Area under fumigation,			
	DO NOT ENTER/NO ENTRE" both in			
	English and Spanish.			
	- Name and EPA Reg. No. of the			
	fumigant used.			
	- Name, address, and a 24-hour telephone			
	number (including weekends) of the			
	fumigation company and certified			
	applicator to allow prompt			
	communication with the fumigation			
	company in case of emergency.			
	[N.J.A.C. 7:27-8.13(a)]			
	[11.3.11.0. 1.21-0.13(a)]			

0	A 11 1 1 1	N. C. 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	None	N.T.
8	All windows, doors and entrances must		None.	None.
	be closed during the fumigation process.	prior to each fumigation event.		
	The building shall not have holes, cracks,	,		
	or door and window gaps that could	[N.J.A.C. 7:27-8.13(d)]		
	function as an unauthorized emission			
	point. Holes or cracks 1 inch or greater in	$\mathbf{n}$		
	width are considered unauthorized			
	emission points and will not be			
	acceptable during fumigation activities.			
	[N.J.A.C. 7:27-8.13(a)]			
	( / )			

9	Designate emission point(s) at the facility on a site plan. Provide the distance to the nearest property line relative to emission points. The facility shall direct all aeration streams through the designated emission point of that fumigation event.  [N.J.A.C. 7:27-8.13(a)]	None.	Maintain the site map with the property line and emission point(s). Include distances in feet.  [N.J.A.C. 7:27-8.13(d)]	The Permittee shall submit a Site Plan drawing reflecting the distance to property line from the emission point. Label the shortest distance from the property line to each emission point. This drawing shall be attached along with the registration.  [N.J.A.C. 7:27-8.13(d)]
10	The discharge for each fumigation and aeration event shall be vertical and through a single discharge stack with a Height = > 18 ft above ground level and a Distance to Property Line = > 10 ft. Mechanical Aeration shall assist the discharge once the treatment period has ended.  [N.J.A.C 7:27-8.13(a)]	None.	Maintain and have available onsite during all fumigation related activities the following ventilation specifications.  i. Stack height (ft) above ground level.  ii. Stack diameter (in).  iii. Rated fan capacity or flow rate (cfm).  [N.J.A.C. 7:27-8.13(d)]	None.
11	Scenario #1: For a 4-inch stack diameter, Fan Volume Flow = > 300 ACFM.  Scenario#2: For an 18-inch stack diameter, Fan Volume Flow = > 5,000 ACFM.  [N.J.A.C. 7:27-8.13(h)]	None.	Recording by manual logging of parameter or storing data in a computer data system at least once at the start of mechanical aeration.  Each fumigation shall have its own record. See Reference #16 Recordkeeping Requirement.  [N.J.A.C. 7:27-8.13(d)]	None.

12	Monitoring equipment shall be	Monitored by visual determination	Calibration records shall be	Calibrations shall be conducted at least
	maintained, operated, and calibrated in	prior to each fumigation event.	maintained on-site for review by	once per year.
	accordance with the manufacturer's		the Department upon request.	
	recommendations.	[N.J.A.C. 7:27-8.13(d)]		[N.J.A.C. 7:27-8.13(d)]
			[N.J.A.C. 7:27-8.13(d)]	
	[N.J.A.C. 7:27-8.13(a)]			

- Tarps and associated repair material shall be a minimum thickness 6 mil (240 microns) and shall be constructed from the following materials (as per fumigant label):
  - 1. Laminated (several layers) polyethylene
  - 2. Vinyl coated nylon
  - 3. Neoprene coated nylon
  - 4. PVC (polyvinyl chloride) coated nylon

Tarps shall be maintained in good condition, free of visible punctures. The tarps shall be inspected before each fumigation event to ensure effectiveness. If the tarp has been compromised, it shall be repaired to ensure functionality or be replaced.

Repair events for multiple reuse tarps shall be performed according to the following:

- 1. Use tape with a thickness greater or equal to tarp thickness.
- 2. Tape material shall be consistent with approved tarp materials listed herein.
- 3. Tape and spray adhesive shall be applied to both sides of the tarp to address all tears.

Each tarp shall be used until integrity has been compromised and the tarp is no longer effective at holding fumigant, or for a period not to exceed 12 months from date of initial use, whichever comes first.

[N.J.A.C. 7:27-8.13(a)]

Monitored by visual determination, per application.

The tarp used for each fumigation event shall be labeled accordingly and inspected before each fumigation to assure tarp integrity and effectiveness is maintained.

[N.J.A.C. 7:27-8.13(d)]

Recording by manual logging of parameter or storing data in a computer data system per application.

For each fumigation event, the person inspecting the tarp should record the following:
(1) Tarp ID number and date of initial fumigation event for tarp; (2) date of inspection; (3) the number of times the tarp has been used; (4) observed results and conclusions; (5) descriptions of corrective action taken, if needed; (6) Name of person(s) conducting the inspection.

Purchase orders shall be made available for review immediately upon request to demonstrate the specifications of the tarp and repair material.

[N.J.A.C. 7:27-8.13(d)]

Notify by phone: Upon occurrence of event.

The Permittee shall immediately notify the Department of any non-compliance by calling the Environmental Action Hotline at (877) 927-6337.

[N.J.S.A. 26: 2C-19(e)]

14	The enclosure fumigation shall be placed	Monitored by visual determination,	Recording by manual logging	Notify by phone: Upon occurrence of
	indoors on a sufficiently airtight	prior to each fumigant event.	of parameter or storing data in	event.
	foundation, such as another tarp or on	DI I A G 7 27 0 12(1)]	a computer data system per	The Permittee shall immediately notify the
	concrete, and covered with a fumigation	[N.J.A.C. 7:27-8.13(d)]	application.	Department of any non-compliance by
			For each fumigation event,	calling the Environmental Action Hotline
	tarp. The edge of the tarp on the		records shall be kept of:	at (877) 927-6337.
	foundation must be sealed by either:		• The sealing method	(877) 927-6337.
	a. Sand/water snake		used	
	b. Adhesive tape		• Any seal malfunctions	[N.J.S.A. 26: 2C-19(e)]
	_		<ul><li>(if applicable)</li><li>Any seal repairs (if</li></ul>	
	Sand/Water snakes must be inspected		applicable)	
	for integrity and repaired or replaced as			
	needed.		[N.J.A.C. 7:27-8.13(d)]	
	Before adhering tape to the floor, any			
	loose dirt/debris must be removed from			
	the floor to ensure a proper seal.			
	EN LA C 7.27 9 12(-)]			
	[N.J.A.C. 7:27-8.13(a)]			

15	The amount of Sulfur Fluoride used shall not exceed 9,000 pounds annually (4.5 tons/year).	Monitored by material balance over a 12-month rolling period, calculated monthly.  [N.J.A.C. 7:27-8.13(d)]	Recording by manual logging of parameter or storing data in a computer data system monthly.  Once a month the permittee shall confirm that the amount	Submit a report: Annually by March 1 of each year for the preceding calendar year to NJDEP, Bureau of Stationary Sources at <a href="mailto:pcpnotices@dep.nj.gov">pcpnotices@dep.nj.gov</a> .
	[N.J.A.C 7:27-8.13(h)]		of Sulfuryl Fluoride recorded in each fumigation as required in Ref #16 does not exceed this annual limit. [N.J.A.C. 7:27-8.13(d)]	The annual report shall include the total amount of fumigant emitted, the total number of fumigation events, any instance where additional fumigant was introduced, and any instance where the concentration reading inside the tarp exceeded 1 ppm after four hours of mechanical aeration.
				[N.J.A.C. 7:27-8.13(d)]
16	Sulfuryl fluoride <=300 lbs/day. [N.J.A.C. 7:27-8.13(h)]	Monitored by material balance per application over a 24-hour rolling period, calculated per application.	Recording by manual logging of parameter or storing data in a computer data system daily.	None.
		[N.J.A.C. 7:27-8.13(d)]	The Permittee must record the following:  1. Date of fumigation initiation.  2. Name of certified applicator and license number.  3. Location of fumigation within the warehouse/building and Equipment NJID.  4. Tarp ID number.  5. Emission Point NJID.  6. If operated in the	

			respective fumigation, any Control Device NJID.  7. Volume of commodity to be fumigated in cubic feet.  8. Amount of fumigant introduced initially.  9. If additional fumigant is introduced shall be recorded separately.  10. Time fumigant is introduced.  11. Time mechanical aeration begins.  12. Time mechanical aeration ends.  13. Any fumigant concentration reading greater than 1 ppm after mechanical aeration.  14. Flow rate of exhaust fan in ACFM  15. Method of tarp sealing (tape/snakes/both)  [N.J.A.C. 7:27-8.13(d)]	
17	If fumigation is occurring in multiple industrial structures (as defined in this	Monitor the number of fumigations daily.	Record the number of fumigations daily.	None.
	general permit), and they are being		Each fumigation shall have its	
	aerated simultaneously, they must all	[N.J.A.C. 7:27-8.13(d)]	own record. See Reference #16	
	vent to the same stack which shall not		Recordkeeping Requirement.	
	exceed the emission limit in lbs/day.		[N.J.A.C. 7:27-8.13(d)]	
	[N.J.A.C. 7:27-8.13(a)]		. , -	

Minimum total aeration time => 4 consecutive hours to ensure levels are below acceptable levels in Reference 19 below:  [N.J.A.C. 7:27-8.13(h)]	[N.J.A.C. 7:27-8.13(d)]	Record the total aeration time.  Each fumigation shall have its own record. See Reference #16 Recordkeeping Requirement.  [N.J.A.C. 7:27-8.13(d)]	None.
The enclosure tarp shall not be removed until the enclosure's fumigant concentration is 1 part per million (ppm) or below for two consecutive measurements.  After the minimum required aeration time, mechanical aeration shall stop and remain stopped until all required measurements are completed.  If the concentration of fumigant is greater than 1 ppm, mechanical aeration shall resume until subsequent enclosure fumigant measurements show a concentration(s) below 1 ppm.  [N.J.A.C. 7:27-8.13(a)]	Monitoring will consist of 2 consecutive measurements, conducted no less than 15 minutes apart, where mechanical aeration is ceased during the entire monitoring cycle.  Monitoring will be performed in accordance with USDA recommended practices.  [N.J.A.C. 7:27-8.13(d)]	concentration inside the tarp, and	Submit any exceedances in the annual report. See Reference #15 Submittal Requirement for instructions.  [N.J.A.C. 7:27-8.13(d)]

20	The volume of the enclosed fumigation	None.	The Permittee shall record the	None.
	area shall be no greater than 200,000		Volume of commodity to be	
	ft^3.		fumigated in cubic feet.	
			Record the total volume of the	
	[N.J.A.C. 7:27-8.13(a)]		fumigated area.	
			Each fumigation shall have its	
			own record. See Reference #16	
			Recordkeeping Requirement.	
			[N.J.A.C. 7:27-8.13(d)]	