Cannabis Odor Abatement Plan (Revised)

September 23, 2020

Prepared for:
Aultmore Capital CRE Property I, LLC And
Pacific Grown Organics, LLC

Site Address: 5892 Via Real Carpinteria, CA 93013

Prepared by:
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Attn: Aultmore Capital CRE Property I LLC
5892 Via Real
Carpinteria, CA 93013

1.0 Compliance with Standards

On behalf of Aultmore Capital CRE Property I LLC (the applicant), Criterion Environmental, Inc. has prepared this Cannabis Odor Abatement Plan in compliance with the Santa Barbara County Coastal Zoning Ordinance, Section 35-144U. Cannabis Regulations. This plan included the evaluation of the following:

1. The proposed project site, and analysis of existing infrastructure;
2. Odor emitting activities including cultivation activities and processing taking place onsite;
3. Surrounding land uses including proximity of residential areas;
4. Site-specific installation of the proposed odor abatement system (Byers System) surrounding the greenhouse and processing areas;
5. Technology effectiveness in reducing and/or eliminating cannabis-related odors; and
6. Other options for best available odor control technologies and an analysis of systems available;
7. Ecosorb content and health studies.

2.0 Site Description

Aultmore Capital CRE Property I LLC is applying for a Coastal Development Permit (CDP) pursuant to the County's Coastal Zoning Ordinance for indoor cannabis cultivation and associated uses at 5892 Via Real, Carpinteria, CA 93013. There is no change of use from the current agricultural operations on site, and no new additional structures or expansion of footprint is proposed other than what currently exists on the property. For flowering cultivation, the applicant will utilize 185,625 square feet of existing greenhouse space, 13,125 for propagation and immature plants (nursery), 2,400 square feet for drying and packaging, and 800 square feet for a boiler room, totaling 201,950.

3.0 Description of Odor Emitting Activities and Phases

Potential odor emitting activities that may occur on-site are as follows:

Cultivation

Immature plants (nursery): Immature plants are not odor creating as it is not yet releasing terpenes. Immature plants are kept in the nursery for approximately three weeks before being transferred to the greenhouse to begin their vegetative process.

Vegetative plants (greenhouse): Vegetative plants are not yet releasing terpenes and are therefore not odor emitting. Vegetative plants will spend 2-3 weeks in the greenhouse with light assistance, depending on the time of year.

Flowering plants (greenhouse)**:** Once vegetating plants are mature enough, the plant will flower and produce terpenes that emit odors. Depending on the time of year, light deprivation will be used to force the plants to flower. Plants are in this phase for 4-5 weeks prior to harvest.

Processing: Once flowering plants are harvested, they will be hung in covered carts inside the greenhouse to contain odor and then transported to the drying room. The covered carts will travel approximately 20 feet between the air-controlled greenhouse's air curtain and the drying room for approximately 7-10 days to dry before being placed in totes in preparation for transportation. The totes will then be stored in climate-controlled rooms to prevent deterioration or contamination prior to transportation. For a typical harvest, batch bucking may take 3.5 days, and trimming/bagging may take seven days.

4.0 Byers Odor Equipment and Methods

Byers Scientific and Manufacturing is used primarily to mitigate cultivation odors in greenhouses and processing odors in other structures. Byers Scientific and Manufacturing is the best available technology to mitigate odors from cannabis processing activities and cultivation in greenhouses. As wind approaches a greenhouse, from any direction, the first thing it will encounter is the virtual curtain of vapor being created *if the perimeter system is installed*. Gases emitting from roof-vented greenhouses actually tend to gather in the valleys between the ridgelines initially. This gathering is due to the eddy effect created by the vents themselves. As the wind carries the vapor through the valleys, neutralization occurs as the neutralizer and cannabis odors mix. Encountering an additional section of vapor is an additional measure of dosing. It should be noted that just as the wind first encounters the vapor curtain as it approaches the greenhouse, a third dosing occurs as it exits further adding to neutralization.

The Byers System is an approved system as defined by the County of Santa Barbara's Coastal Zoning Ordinance, Section 35-144U Cannabis Regulations – which includes a "vapor phase system." Furthermore, the Byer's System is an approved vapor phase system because it meets the following standards:

- **"The resulting odors must be odor-neutralizing, not odor masking"** - The neutralizing agent (CNB 107) is an actual deodorant neutralizer (not masking agents) specifically formulated for cannabis odors.

- **"The technology must not be utilized in excessive amounts to produce a differing scent (such as pine or citrus)"** - The neutralizing agent does not generate differing scents and is used in a proportional amount to the cannabis odor emissions. The system can be modified or adjusted to deliver the deodorant with the objective to obtain a neutral odor.
- **"Use of these systems must have supporting documentation which meet the United States Environmental Protection Agency's Acute Exposure Guideline Levels or similar public health threshold" -** The deodorant CNB100 and/or neutralizing by-products is not a public health (acute or chronic) or environmental concern with supporting documentation that meets the United States Environmental Protection Agency's Acute Exposure Guideline Levels or similar public health thresholds. An independent study (Dated December 8, 2017) was performed by CPF Associates titled Screening Health Assessment of Waterless Vapor Phase Odor Control Technology. This health study of the CNB100 deodorant was performed to evaluate the potential air impacts and public health risks through inhalation exposure. The conclusions from the study indicated that the use of CNB100 within the operation of the Byers System would not be expected to pose a public health concern. The study also concludes the potential air concentrations calculated using a screening-level model in the immediate vicinity of the distribution pipe were below available health-protective inhalation criteria.

The Byer's System is an industry leader in odor neutralizing, utilizing vapor-phase technology as the best available technology to prevent cannabis nuisance odors from drifting off-site. The odor abatement system is manufactured by Byers Scientific and Manufacturing and consists of the following (See Attachment 1 for technical information):

Byers System Housing Unit

How it works:

Within the housing system unit (See Photo), a high-flow, low-pressure blower is connected to a holding tank containing an odor neutralizing agent developed specifically to neutralize odors from cannabis. The fan unit vaporizes the odor neutralizing agent and distributes it to a piping system.

The PVC piping is mounted in conjunction with a greenhouse exhaust. The neutralizing agent is injected into the air stream, and the cannabis terpene molecules are then neutralized as they mix with the neutralizing agent and fall to the ground.

A computer monitoring system which is capable of notifying the operator if an equipment failure has occurred so that the system can be repaired and returned to service as soon as possible.

4.1 Neutralizing Deodorant; Ecosorb CNB107

The odor neutralizing agent to be used within the Byers system is Ecosorb CNB 107 (CNB 107), which is a modified version of CNB100 and is manufactured by OMI Industries, a leader in odor neutralization materials. CNB is comprised of two polysorbate surfactants and a blend of citrus and pine oils with the remainder water (see Attachment 1 for SDS Sheet). As described in the Safety Data Sheet within Section 11, Toxicity, it is listed that there are no other effects known under "Potential Adverse Human health effects and symptoms." In addition, upon review of the confidential and redacted formulation, the Santa Barbara Air Pollution Control District staff have confirmed that none of the ingredients in Ecosorb CNB 100 are considered toxic air contaminants (TACs) as identified by the State of California. It is our understanding after correspondence with Byers Scientific that the CNB 100 and CNB107 are a similar chemical composition with the same ingredients; however, the CNB 107 formulation is more concentrated.

4.2 Site Specific Design Parameters of the Odor System

The Byers Scientific system design for the 5892 Via Real greenhouse includes a single pump system with approximately 1,200 linear feet of perforated piping. Considering the unique dimensions, airflow, and layout of the greenhouse, the vapor emitting perforated piping will be installed inside a mixing chamber along the northern wall of the greenhouse. This mixing chamber is designed to capture all cannabis terpenes produced inside the greenhouse and direct them into this single, treatable area. The long and narrow layout of the greenhouse (175ft x 1125ft) offers the unique opportunity to create a directional airflow pressure system. This is assisted with ninety 36" exhaust fans mounted on the north side of the greenhouse, approximately 400 directional fans, and motorized louvers on the south wall of the greenhouse to control air intake (see Figure 1).

In the case of a power outage, backup generators are prepared to maintain essential systems that prioritize the odor control functions of the facility.

Figure 1

4.3 Mixing Chamber Design

The mixing chamber will be created by erecting an airtight, temporary barrier made out of plastic or polycarbonate eight feet inside the northern wall of the greenhouse. Exhaust fans will be mounted on existing greenhouse posts of the temporary wall. The mixing chamber's exhaust will be a 2' opening the length of the greenhouse at ground level. The Byers perforated pipe will be located 2' above the ground, and 2' from the interior temporary wall (See Figure 2).

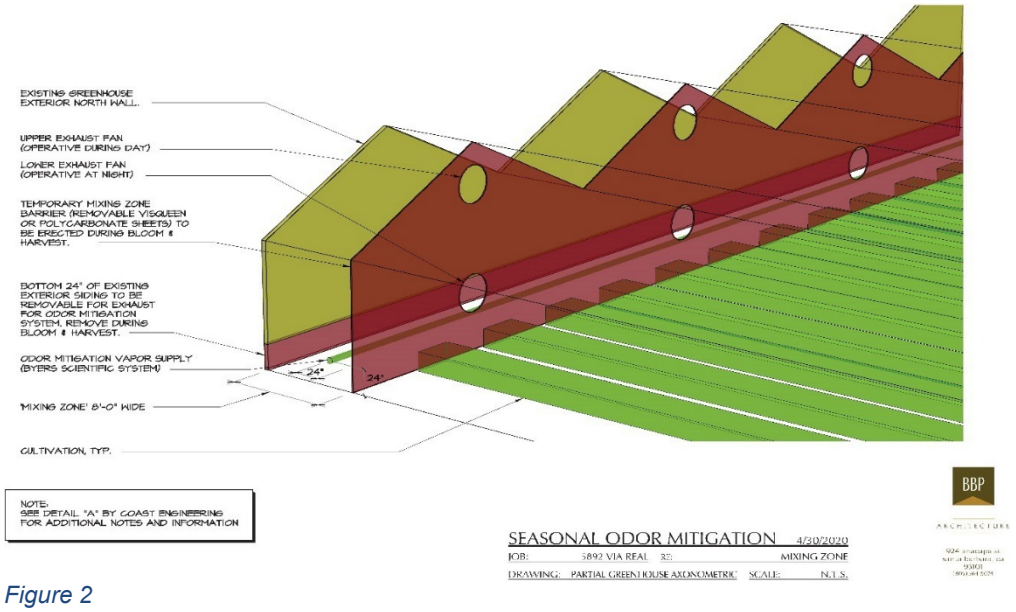


Figure 2

4.4 Mixing Chamber: Internal Function

Inside the mixing chamber, there are two exhaust fans per bay of the greenhouse; one at ground level and one in the gable of the greenhouse (above the retractable light deprivation curtains). These fans will run interchangeably depending on whether the light deprivation curtains are extended or retracted. During the day, when the curtains are retracted, the upper fans will evacuate air out of the gable, and during the night when curtains are extended, the lower fans will be used. The vaporized neutralizing agent is released from the PVC piping via pressure valves into the air stream, where it continues to rise until it meets with the cannabis terpene molecules. Inside the chamber terpene molecules are met with a constant flow of rising neutralizing vapor from below, which neutralizes the odor. Both fans are oriented in an upward direction to maximize the amount of time that the terpene-rich air is exposed to the Byers vapor system. This allows time for the molecules to neutralize and become heavier so that once they exit through the exhaust at ground level, the molecule will fall directly to the ground and avoid dispersion. (See Figure 3).

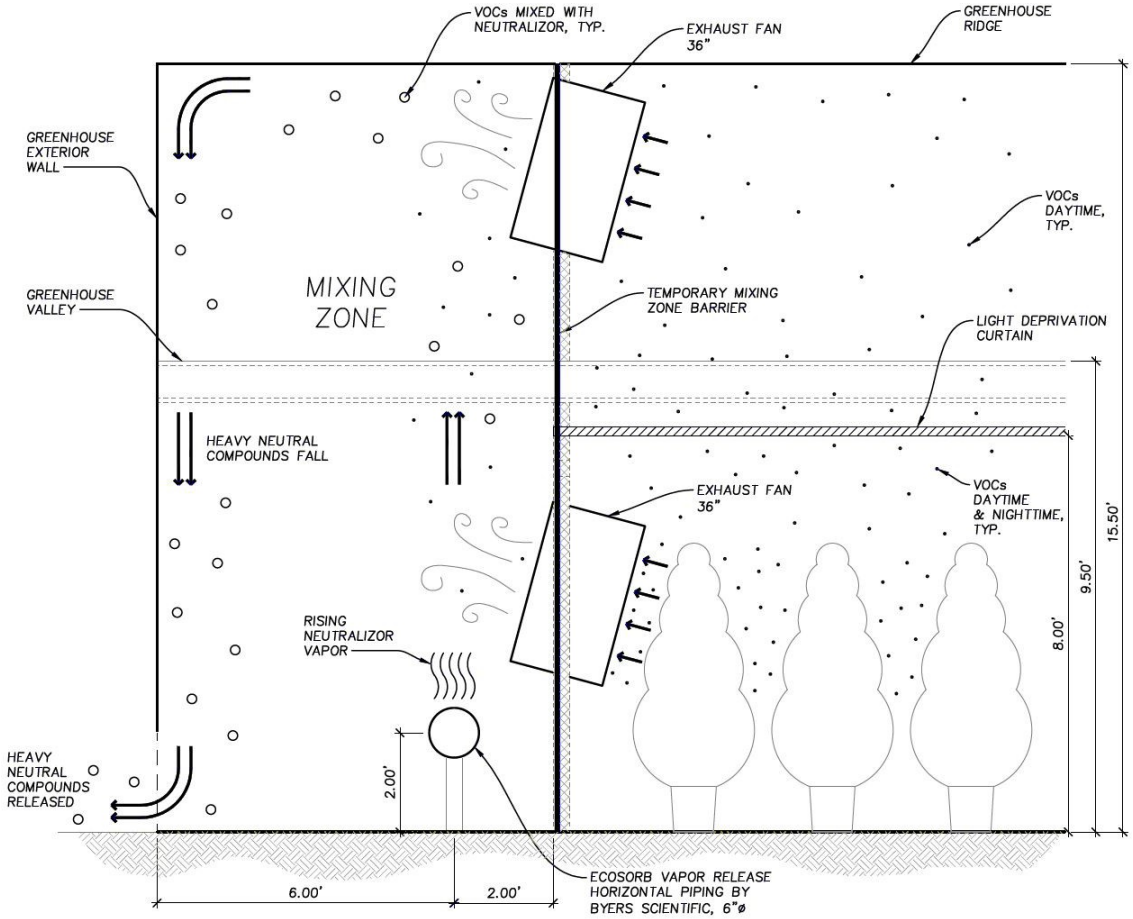


Figure 3

5.0 Carbon/Charcoal Filters

Carbon filtration systems are effective in mitigating odors but are not generally used within greenhouses due to the extremely large amount of air volume needed to be processed. Carbon filtration is only effective in enclosed structures, such as warehouses and/or trimming/drying rooms, etc. and are only effective when they are used in conjunction with an inline fan to pull the air through the filter which includes activated carbon or charcoal. In other words, odor reduction is only achieved if the air moves through the carbon filtration mechanism, which is not feasible in a venting greenhouse. Enclosing a greenhouse and attempting to use carbon filtration instead of the vapor phase, would require the installation of elaborate HVAC systems in the greenhouses resulting in increased energy usage and is not a feasible option.

The applicant is planning to utilize 5 CAN-LITE filters 10" horizontal air cleaners, or comparable best technology, with activated carbon filters within each room of the packing house and the nursery for additional odor reduction. The activated carbon filters deliver approximately 1,500 CFM and will be placed within the structures to be most effective for odor mitigation. Maintenance and filter replacement will occur according to the manufacturers' specifications (See Attachment 4 for specifications).

6.0 Air Curtains

Air curtains will be installed at each entrance on either end of the greenhouse, and at both loading bays into the warehouse containing the drying and processing rooms where harvested cannabis will enter and be kept (See Figure 1 and see Attachment 5 for specifications).

7.0 Initial VOC Monitoring Upon Operation

Once the PGO greenhouse achieves full flower production, and during the first harvest, at times when terpene generation and emissions are expected to be at maximum, PGO will engage a qualified third-party VOC detection company approved by the County to implement a testing protocol that includes continuous measurement of VOC concentrations to a parts per billion (ppb) level for a minimum of seven (7) consecutive days at the following locations: within the greenhouse, in the odor abatement mixing zone, at the exterior vents, at the side ally with exhaust fans, on top of the Property fence line, and at the perimeter of the cultivation premise. Please see the attached map, Attachment A. The testing protocol will identify the key objectives of the testing process, including but not limited to an assessment of the effectiveness of the greenhouse and processing structures to contain odors, odor neutralization system effectiveness and efficiency, identification of areas and direction of potential offsite odor migration, and an assessment of the quantity of VOC emissions generated in the greenhouse.

a. PGO will request that neighboring properties allow access for VOC setback testing to extend up to 300 meters onto their properties to further develop an understanding of VOC emissions and attenuation, deodorant attenuation, and

odor fall off. The refusal of any of these parties to cooperate will not affect PGO's obligation. The test will continue for a minimum of seven (7) days.

b. PGO shall identify each of the strains grown during the testing period, the volumes and flow levels of deodorants, provide the harvesting SOPs employed during the testing period, and note in detail any significant deviations from SOPs or circumstances that might affect the integrity of the testing period to serve as a representative of typical operations.
c. The data gathered from this test will be made available per request to the County, the COL, and any other interested parties. A report will be prepared addressing the test objectives and summarizing observations, including characterizing the state of the operation during the test period, including production, staffing, processing activities, meteorological conditions, and any other operational factors, and an assessment of the effectiveness of the greenhouse and processing structures to contain odors, odor neutralization system effectiveness and efficiency, identification of areas and direction of potential offsite odor migration, an assessment, calculation or estimate of the quantity of VOC emissions generated in the greenhouse, and any recommendations for future testing protocols and evaluations (Initial VOC Monitoring Report).
d. Analysis of and reporting on this data will be performed by a qualified, neutral and County-approved acceptable third-party scientist, and assessments will be made as to the concentrations of VOCs at the above tested locations. This information will be provided in a clear, presentable format and made available per request to the County, the COL, and any other interested parties.
e. If VOC levels at any of the Property lines or the neighboring fence lines upon agreement by the neighbors[1] surpass the human-odor detection threshold,[2] PGO shall commission an air model or a similar analysis to assess VOC distribution rates from the Property so projected odor concentrations at nearby residences and publicly accessible spaces can be assessed during different weather conditions. A testing protocol shall be developed before the sampling and a report prepared. This information will be provided per request to the County and interested parties to assess VOC attenuation and the efficacy of the PGO OAP.

Proposed VOC Testing Sites:

[1] If PGO can secure permission from its neighbors to consent to the potential drift of odor causing compounds onto their properties, then the neighbor's exterior property line furthest from the Property will be used to measure VOC levels for purposes of this analysis.

[2] See Consideration No. 1 below. While at this time, the threshold for human detectable cannabis odor as a concentration of cannabis VOCs is not sufficiently understood, PGO commits to support this understanding and agrees to maintain VOC levels at a non-detect odor threshold at the nearest residence and at each publicly-accessible location space (e.g. park).

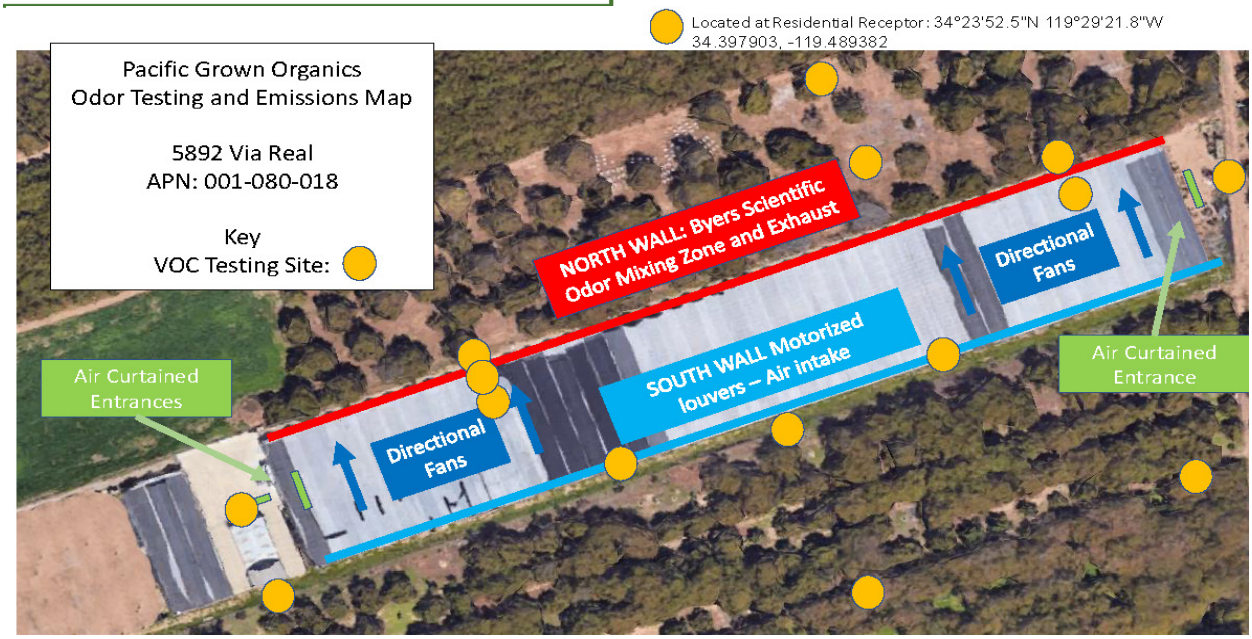


Figure 4

8.0 Residential Zones

The Premise is located on a property zoned AG-1 and is surrounded by agricultural property. Historic uses on the property include the cultivation of cut flowers and cannabis. The closest residential zoned property to the greenhouse exhaust is 416 ft, with the closest residence 602 ft away (See figure 5).

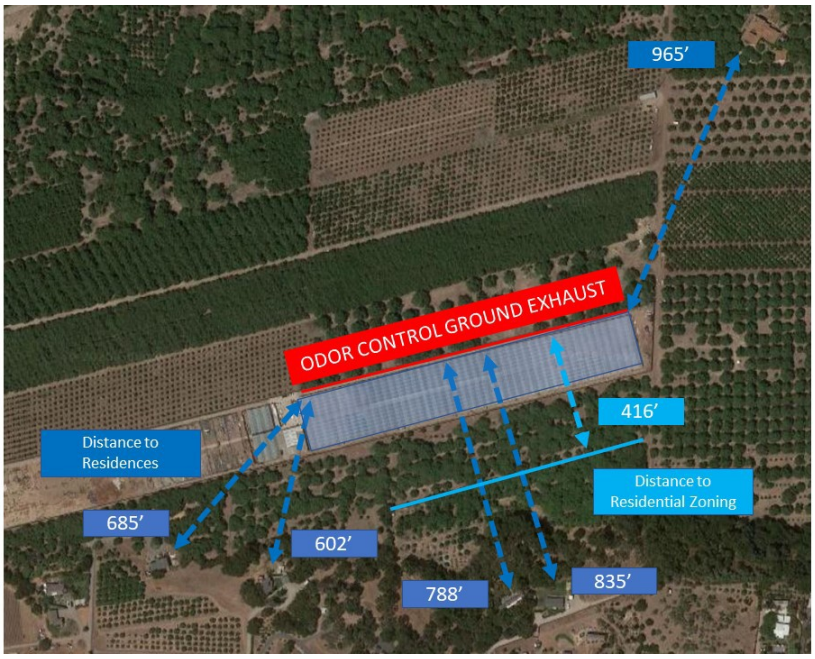


Figure 5

Field Observations

Criterion Environmental personnel, including myself, have also performed olfactory assessments at various cannabis cultivation properties in Carpinteria that are deploying the Byers Odor abatement technology. Results from these assessments are similar to the findings from APCD in that there is a substantial reduction in the cannabis related odor intensity within a few feet of the odor emitting source. The onsite field assessments also indicated an obvious reduction or dissipation in odor observation the further downwind from the mixing zone. The mixing zone is the air space above the piping delivery system where the deodorant neutralizer and the cannabis odors interact.

9.0 Odor Inquiry Response and Corrective Actions

In the event of a perceived odor incident resulting from cultivation of cannabis at 5892 Via

Real, please contact at any time:
Collin Dvorak, General Manager
collin@pacificgrownorganics.com
www.pacificgrownorganics.com/communityoutreach
(805) 341-7599

Community Participation and Outreach

PGO will provide property owners and residents located within 1,000 feet of the Property the above contact information annually by US Mail and will promptly notify both the County and neighbors within 1,000 feet of any changes to this information. Additionally, PGO will maintain its own list of interested parties referred to as the "Community Outreach List" (COL), made up of individuals and organizations that request to be included on the list via the Pacific Grown Organics website or by direct contact. PGO will provide bi-annual Project updates to this list to engage the interested community and facilitate efforts to accurately identify the source of odor and effectively mitigate odor, with the goal of avoiding Odor Episodes. PGO will also request community feedback and participation in this process on its website at www.pacificgrownorganics.com/communityoutreach.

In the interest of responding rapidly to odor inquiries and based on the time sensitive nature of identifying the odor source, PGO invites the public to contact the above individual directly with any odor concerns, or to submit an inquiry at www.pacificgrownorganics.com/communtityoutreach to ensure prompt and conclusive action. PGO encourages community participation and commits to identifying the cause of Odor Episodes so it can continue to improve its system and operating procedures. This will require reporting of the time and specific location of any offsite detection.

For an odor inquiry to be considered and addressed, it must be deemed "Substantially

Complete" by identifying, at minimum, one of the following: (a) PGO's address, (b) PGO's or Aultmore's name, or (c) perception of odor at a specific location within 1,000 feet of the boundaries of the Property (including Monte Vista Park: 34.3921807, -119.4957228) and must include the date, time, and specific location of the reported Odor Episode ("Odor Inquiry"). PGO will accept Odor Inquiries from the County, its online community portal or directly from a resident or other reporting party.

At any point if an Odor Inquiry is be deemed "**Resolved**", an "**After Episode Report**" will be submitted to the County, the reporting party (if contact information was provided), and PGO's COL.

a. Level 1 Response – Initial Assessment and Corrective Actions

Once a Substantially Complete Odor Inquiry has been received, a PGO manager will take the following actions:

Immediately, or no later than 12 hours after the Odor Inquiry is received, PGO shall perform an onsite visual inspection to ensure the function and integrity of the following:

1. impermeable fence line surrounding the cultivation premise;
2. exhaust vent at the ground level of the north wall of the greenhouse;
3. motorized louvers on the southern wall of the greenhouse;
4. internal directional airflow fans;
5. northern wall exhaust fans;
6. Byers Scientific vapor-phase pipeline within the odor-deodorant mixing chamber area; and
7. perimeter of the processing building and each of its points of exhaust.

If, after the visual inspection is complete, a reasonable cause for the reported Odor Episode was found, PGO shall promptly restore the function and integrity of the odor abatement system and/or repair any equipment or infrastructure, and after these responses, if the odor is not detectable at the known or expected reporting location, this Odor Episode shall be deemed Resolved.

If, after the visual inspection is complete, no cause for the reported Odor Episode was able to be made, a PGO representative will, if the information is available in the Odor Inquiry, contact the reporting party to follow up on the Odor Inquiry to determine if the Odor Episode has continued. If the reported Odor Episode is not continuing or recurring, PGO shall not be required to undertake additional assessment and the Odor Inquiry shall be deemed Resolved.

b. Level 2 Response – Diagnostic Assessment and Corrective Actions

If, after the Level 1 visual inspection is complete, PGO staff observes odors, receives further reports of odors, or the reporting party responds that the reported Odor Episode is persisting or is recurring periodically during the following eight (8) or more hour period, PGO will, as soon as practicable and within 24 hours:

1. Conduct a weather assessment (wind speed, direction, and any shifts) of the conditions that were occurring at and after the time of the Odor Inquiry to help isolate the location of the emissions and the conditions that resulted in the reported Odor Episode;

2. Perform a diagnostic review of the Byers Scientific odor abatement system;

3. Interview staff that were on site during and before the time of the Odor Inquiry and determine if they performed or observed any actions or circumstances that may have caused or contributed to the reported Odor Episode or that may have conflicted with PGO's standard operating procedures for odor abatement;

4. If the reporting party is identified in the Odor Inquiry, PGO shall contact the reporting party, and if the reporting party agrees, PGO shall dispatch an employee or consultant to the location of the Odor Inquiry to interview the reporting party on the character of the odors, the duration of the reported Odor Episode, and if the reported Odor Episode is continuing, capture a sample of the air from the location with the highest detectable odor via Tedlar Air Sample Bag, Summa canister, handheld analytical device or other proven technique. The collecting individual will manage the sample for analysis using standard industrial custody control and handling protocols;

5. Record all operational factors in existence during the reported Odor Episode – percentage of greenhouse that contains flowering plants, date/time of last harvest period, strains of cannabis in flowering and harvest stages, status of operations and activities at processing facility, status of odor abatement system and all fans installed in the processing facility and greenhouse, and weather conditions, and

6. Repair or correct any conditions discovered that may cause or contribute to Odor Episodes from the Project.

If, after this assessment is complete, a cause for the reported Odor Episode was able to be identified, the cause is rectified and the Odor is not detectable at the reporting location, PGO shall revise its SOPs to address the condition(s) that resulted in the Odor Episode, and report the conclusions of its investigation. PGO will then contact the reporting party and inquire about the presence of odor, and may, with the approval of the reporting party, re-visit the location where the Odor Episode was observed. If detectable cannabis odor is absent, this Odor Inquiry shall be deemed Resolved.

If after this assessment is complete, and no cause for the reported Odor Episode was able to be made, PGO shall contact the reporting party, and if possible, visit the location

where the reported Odor Episode was observed. If detectable cannabis odor is absent, PGO shall prepare a written report summarizing the Level 2 Diagnostic Assessment but not be required to undertake additional assessment or corrective actions. This Odor Inquiry shall be deemed Resolved. If odors re-occur in the same or similar location within a seven (7) day period from the date of the initial report, PGO shall conduct the Level 1 and 2 processes within 24 hours, and if the Odor Episode is continuing, and immediately proceed to implement Level 3 protocols.

c. Level 3 Response – Analytical Assessment and Corrective Actions

If, after the Level 2 is assessment is complete, and if no cause for the reported Odor Episode is found in the first 24 hours, and the reported Odor Episode continues unabated, within three (3) business days of receipt of the Odor Inquiry PGO will:

1. If the reporting party location is known and with the permission of the reporting party, commission a qualified third party to perform an on-site air sample test to measure VOC levels at the same location(s) and time of day or under comparable weather conditions as detailed in the Odor Inquiry, analyze any samples previously collected at the location of the Odor Report, and seek to confirm whether PGO is the source of the reported Odor Episode, including analysis and consideration of whether other cannabis operations may cause or contribute to the Odor Episode. If other cannabis operations are suspected or demonstrated to be a contributing or sole cause, PGO shall contact these other cannabis operations, share the information with them and request their cooperation in resolving the Odor Episode;

2. If no further conclusions are found from these steps, and PGO is unable to identify the potential cause of the reported Odor Episode or show evidence that the reported Odor Episode has a high likelihood of having other origins, the Odor Inquiry will be determined to be Unresolved.

3. In the event the Odor Episode is Unresolved and is recurring or continuing, PGO shall:

a. Inform the COL

b. Engage a County approved qualified third party to perform a VOC monitoring study at the Property and neighboring residences3 for seven (7) days whose testing protocol is designed to identify and eliminate the source of the Odor Episode

c. Undertake all reasonably available adaptive management actions to eliminate Odor Episodes

[3] Chonnie Bliss (Northern Residence): (34.3979030, -119.4893820) and ERDN: (34.3938459, -119.4922131).

d. If the analysis determines the Odor Inquiry identified an Odor Episode, PGO commits to immediately undertake additional and continuing efforts reasonably calculated to eliminate Odor Episodes, such as but not limited to:

i. Undertake a series of substantial and demonstrable actions to seek to eliminate Odor Episodes

ii. Retain a qualified industrial hygienist, air pollution control engineer or other qualified company or individual to assist in identifying the source of an Odor Episode and methods to control it

iii. Redeploy the VOC vapor testing system for an additional seven (7) days with a revised testing protocol designed to identify the source(s) of the odors and potential appropriate corrective actions, and

iv. Confer with appropriate technical professionals to assess, recommend, and implement appropriate responsive corrective actions.

4. If these actions are insufficient to ensure that Odor Episodes are mitigated, PGO shall meet and confer with the County, notify and offer to meet with the COL, share its conclusions and review strategies for resolving any Unresolved Odor Episode. PGO shall consider strategies of less odiferous cannabis strains, installation of new odor mitigating technologies, curtailment, or other actions that may be reasonably calculated to resolve or moderate the severity of the Odor Episodes.

d. Level 4 Response – Comprehensive BACT Analysis and Corrective Actions

If a Substantially Completed Odor Inquiry remains Unresolved, and a Substantially Completed Odor Inquiry is reported an additional two (2) or more times within a six-month period:

a. If the evidence strongly suggests that PGO is the likely source of or a likely contributing source of the reported odors, PGO will:

i. Commission a comprehensive Best Available Control Technology (BACT) analysis and submit a written report prepared by a qualified County-approved upon consulting firm, engineering firm or technician that includes:

1. The likely or potential source of the Odor Episode.

2. Additional adaptive management techniques, including operational modifications and curtailment that are recommended to eliminate Odor Episodes.

3. Recommendations for new or revised odor abatement technologies.

4. Installation of continuous air quality monitoring equipment or other analytical tools to monitor, identify and quantify the emissions causing or contributing to Odor Episodes

b. If the evidence strongly suggests that PGO is not a sole or contributing source of the reported Odor Episode, PGO will prepare a written report detailing its efforts to identify the source of the Odor Episode, its corrective actions and the evidence that supports the belief that it is not a causal or contributing source and provide that report to the COL and County.

For all Odor Episodes Corrective Actions:

In each case, PGO will also complete an After-Episode Report detailing all efforts taken to resolve the Odor Episode and ongoing odor abatement, including specification of all Adaptive Management actions and Corrective actions.

If these actions are effective, PGO will continue to maintain all applicable Adaptive Management actions, Corrective Actions, revised SOPs and any other effective abatement measures described in this OAP.

1. Provide the odor tracking system records to the County upon inspections or request and maintain the records for a minimum of 5 years;

2. Allow the County access to the site at all times, without notice, to inspect odor mitigation practices, odor sources, and complaint tracking system records.

The applicant will develop and maintain a digital complaint tracking system for a minimum of five years within company files for all complaints received, which documents the following information:

1. Contact information of the complainant;
2. Description of the location from which the complainant detected the odors;
3. Time that the Manager received the complaint;
4. Description of the complaint;
5. Description of the activities occurring on-site when the complainant detected the odors;
6. Actions the operator implemented to address the odor complaint.

The complaint tracking system records will be made available to the Department as part of any Departmental inspections of the cannabis operation, and upon the Department's request.

In conclusion, the applicant understands that failure to respond to odor complaint calls within one hour of the time the initial call was made, may result in revocation of the permit. The applicant will ensure that corrective action shall commence within 2 hours of the initial call and shall allow the County access to the facility at all times, without notice, to inspect odor mitigation practices, odor sources, and complaint tracking system records.

Finally, the applicant understands that if the County receives three verified complaints regarding odor events in one year, the permittee shall undergo corrective actions that comply with odor abatement requirements listed in Section 35-144U.C.7. A written

statement documenting the corrective actions and implementation timing of each corrective action will be submitted at the request of the Department for its review and approval. Applicant understands the Department may enforce or penalize in ways outlined in Chapter 35-108 (Enforcement and Penalties), which could include the revocation of the applicable cannabis land use entitlement and/or permit.

10.0 Weather Monitoring

PGO shall install and maintain continuous weather monitoring equipment at the Property's cannabis facility as directed by a County-approved, qualified third party professional so as to continuously record and transmit weather data, including wind speed, direction and barometric pressure, for as long as it engages in cannabis cultivation at this Property.

This weather data will be maintained electronically and made available per request to the County of Santa Barbara (County) Planning and Development Department, SBC Air Pollution Control District (APCD), involved community groups, the public, any initiative-coordinated regional modeling technicians(s), and any third party interested in analyzing weather data and Volatile Organic Compounds (COC) emissions in the Carpinteria Valley.

PGO commits to support the use of weather data to identify the variables and conditions that can affect Odor Episodes and to better understand the transport and fate of emissions of VOCs and odor production from cannabis operations in Carpinteria, and to encourage other cultivators and interested parties in the County to install similar systems so as to broaden the data gathering efforts of the community, and to encourage development of a regional wind study.

Ion the event that a regional meteorological network is created by the County or other entity, PGO will make available its meteorological data electronically and in real time as may be useful to support any such model. PGO will further otherwise cooperate in the development and refinement of any such model as a tool for the industry, County and community to confirm, respond to and avoid Odor Episodes.

11.0 Analysis of Other Technologies

Ozone generators are often used for odor control, particularly within the structural restoration industry, such as smoke and odor or mold/sewage odor control. However, ozone technology has significant disadvantages and concerns. Ozone is a reactive gas and can be harmful if exposed to humans. OSHA has established permissible exposure limits to workers and EPA, NIOSH, and FDA have all agreed there is an increase in health risk if exposed to ozone. Based on this information, we do not recommend the use of ozone as an odor mitigation technology.

Masking Agents – There are several odor masking agents on the market that essentially disguise a malodor with a stronger, more pleasant odor. Due to the ineffectiveness of actually neutralizing the odor, we do not recommend the use of masking agents.

Other than the currently approved odor abatement technologies previously discussed within this plan (i.e., vapor phase technology & activated carbon filters) along with the Other odor mitigation technologies, Criterion Environmental, Inc. is unaware of any other odor technologies on the market specifically designed for cannabis odor mitigation.

12.0 Conclusions

The Byers vapor-phase system, in conjunction with the use of activated carbon/charcoal filters as supplemental odor removal, are approved odor control technologies with recognition from SB APCD. Based on the review of the proposed technologies, our field observations, the efficiency of odor removal from these odor abatement systems and the site-specific installation at this property, we conclude the following:

- The neutralizing agent (CNB 107) is an actual deodorant neutralizer (not masking agents) specifically formulated for cannabis odors
- The system can be modified or adjusted to deliver the deodorant to obtain a neutral odor and
- The deodorant and/or neutralizing by-products is not a public health (acute or chronic) or environmental concern with supporting documentation that meets the United States Environmental Protection Agency's Acute Exposure Guideline Levels or similar public health thresholds.

In my professional opinion as a Licensed Professional Engineer (PE) and Certified Industrial Hygienist (CIH), the equipment and methods proposed to be used for reducing odors are consistent with accepted and available industry-specific best control technologies. These technologies and methods, when properly designed and monitored, will mitigate cannabis-related odors from being experienced beyond the property lines and within residential zones.

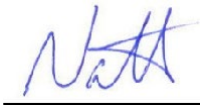
13.0 Limitations

It should be noted and understood that although cannabis activities have been legalized and permitted within the County, it is expected that illegal and unpermitted commercial and personal growing operations will continue within the immediate area. Some of these operations are not complying with State or County regulations, particularly as it relates to odor abatement and are not in full compliance with the County's standards for odor abatement. Therefore, malodor complaints by the public may be incorrectly directed at the

applicant. Cannabis odors, whether "real" or "psychological" are subjective and interpretive, depending on the receptor.

If you have any questions or concerns regarding the information provided, please do not hesitate to call me at 805.432.4888.

Respectfully submitted,



Nate Seward, PE, CIH
Professional Mechanical Engineer (M31978)
Certified Industrial Hygienist (9582 CP)

Attachment 1

Byers Vapor Phase Odor Control System- Technical Brochure & CNB100 SDS

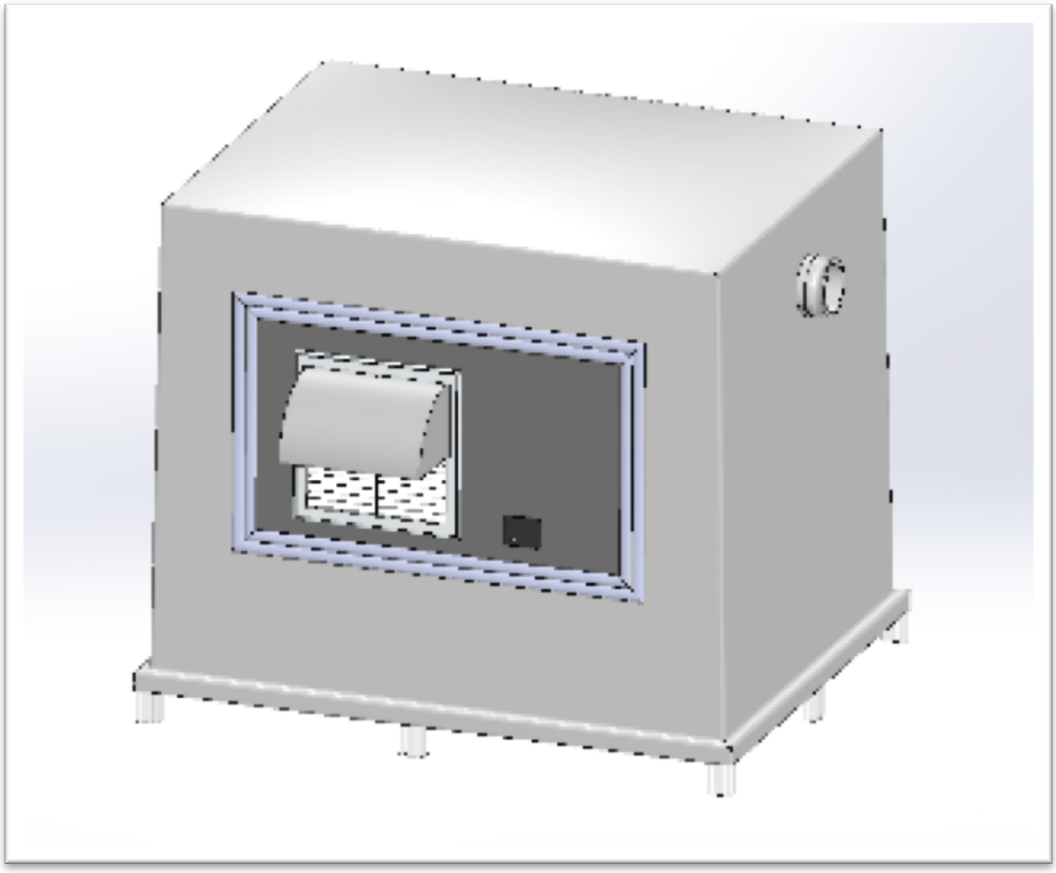
Criterion Environmental, Inc.
1879 Portola Road
Suite K
Ventura, CA 93003

www.criterionenv.com

Phone: 805-644-8347
Fax: 805-644-5347
Email: info@criterionenv.com

Byers Scientific & Manufacturing
Industrial Odor Management

INSTRUCTION MANUAL



Waterless Vapor System
for Odor Control
HPII Series

Read equipment manufacturer's manual before operating or servicing system. Failure to understand how to safely operate the system can result in an accident causing serious injury or death. Only qualified personnel should operate or service the system.

⚠ DANGER			
			
Hazardous Voltage can cause electrical shock or death.	High speed rotating equipment can cause severe personal injury.	Lock out/Tag out to prevent personal injury BEFORE starting ANY service or inspection.	Avoid injury. You MUST read and understand all instructions in this manual BEFORE operation.

TECHNICAL SPECIFICATIONS

SYSTEM OVERVIEW

Footprint 74.5" L x 59.0" D x 63" H

Decibels at 30 feet: 65 dB

Access Door with Intake Filter

- Filter Size: 18" x 18" x 1" Nominal
  - (Actual: 17.75" x 17.75" x 0.75")

63 Gallon Storage Tank

- Internal circulation via eductors
- Level Sensor
- Temperature Sensor
- In-Tank Heater for cold climates
- Tank can be filled by toggle switch operated pump affixed to tote/drum

Evaporation Tank

- Patent-Pending Uniform Vapor Production
- Ultrasonic Booster
- Level Sensor
- Temperature Sensor
- In-Tank Heater
- Can produce up to 7 equivalent gallons of vapor/day
- Tank fills automatically via PLC

ELECTRIC

UL-LISTED PANEL

- 40 / 50 Amp Service Disconnect Switch
- Touch Screen Panel Display
- Indicator Lights
- Programmable Logic Controller (PLC) for Critical System Operations
- Industrial Remote Access Router with External Antenna
- High Limit Heat Safety Controllers

3-PHASE COMPONENTS

(208- 240 / 480VAC)

- Main Blower
  - 7.5 HP Motor
  - 19.4 - 17.6 / 8.8 Full Load Amps
  - 3530 RPM
- Secondary Blower
  - 0.5 HP Motor
  - 3450 RPM
- In-Tank Heater(s)
  - 2000 - 2660 / 3500 Watts
  - 5.6 - 6.4 / 4.3 Amps

36VAC COMPONENT

- Ultrasonic Booster
  - 8.2 Amps

24VDC COMPONENTS

- Diaphragm Pumps (3)
  - 3.0 gallons per hour
  - 3.5 Amps
- Precalibrated Level Sensors (2)
- Precalibrated Flow Meter with Totalizer
- Precalibrated Differential Pressure Sensor (2)
- Temperature Sensors (2)

OPERATION

⚠ SAFETY WARNING

ONLY QUALIFIED PERSONNEL THAT HAVE BEEN
PROPERLY TRAINED SHOULD OPERATE THE SYSTEM

BEFORE TURNING ON

- The yellow handled service disconnect located on the electric panel door must be turned to the ON position. The green indicator light for CONTROL POWER ON will be illuminated to visually show that there is power to the unit
- The display screen will boot up upon turning the yellow handled service disconnect. If it does not, contact Byers Scientific & Manufacturing for further troubleshooting
- Inspect fan inlets for obstructions
- Check that the auxiliary is filled sufficiently and that the vapor tank level is between 47 - 50%
- Once door is closed, open filter access door to make sure a filter is in place

OPERATING THE SYSTEM

- With the door closed and locked, turn the "CONTROL POWER ON/OFF" switch on the electrical panel to the ON position
- A green light under EVAPORTATION FAN RUNNING will indicate that the system is in operation. The MAIN FAN RUNNING indicator light is purposefully delayed and will turn green after three seconds. If a red FAN FAULT appears for either the evaporation or main fan, contact Byers Scientific & Manufacturing for further troubleshooting.
- The system is programmed to be self-operating and we advise that any levels set on the touchscreen should be left as is. Altering the inputs could have a negative impact upon the efficacy of the neutralizing vapor.

- The system will send out an SMS text message or email to personnel to alert of any systems needs e.g., filling auxiliary tank or system fault. Level 1 alarms cause the system to completely shut down to prevent potential harm to the system. Level 1 alarms are primarily due to the VFD (variable frequency drive) on the fans and can be due to a multiple factors, such as low/high supply voltage or motor overheating. After such an event, the fault code displayed on the VFD must be provided to Byers Scientific in order to determine the cause of the fault. Failing to do so and resetting the VFD without understanding the fault can harm the system as the VFD fault codes provide insight to the problem.
- To fill the auxiliary tank, make sure that the "CONTROL POWER ON/OFF" switch on the electrical panel is in the OFF position before opening the door. The toggle switch located inside the system controls the pump plumbed into the drum/tote located next to the system. Flip the toggle switch to the ON position until the level on the auxiliary level sensor reaches a maximum of 99%. Overfilling the tank can lead to a fault and the system will not run.
- When replacing drums/totes, be sure to keep the provided attachment and check the filter at the end of the plumbing before inserting into new drum/tote.
- For optimum performance and results, Byers Scientific & Manufacturing recommends operating the unit full-time at a minimum output level of 3-4 equivalent gallons per day. The specified minimum level of output has been established based on calculations of deodorizer molar mass contrasted with a baseline typical malodor molar mass. When site-specific conditions necessitate a greater degree of output, the unit output may be increased up to 6-7 equivalent gallons of output. Please consult with Byers Scientific & Manufacturing personnel for assistance in programming your unit for scheduled production.

MAINTENANCE

Our systems are built for minimal maintenance but will require occasional servicing. Following the provided guidelines will keep your system functioning without interruption.

REPLACING AIR FILTER

The air filter must be changed on a regular basis per your site's specific environment. Dustier environments may require a change every week whereas systems placed within a building may only need to be changed once a month. Failing to change the filter can cause the system to run suboptimal. If an air filter is not placed in the system, we reserve the right to void the warranty due to negligence of maintenance.

REFRESHING THE EVAPORATION TANK

Due to the make-up of the deodorizer, the Evaporation Tank requires to be purged every 2.5 months. It is preferred that a dedicated portable pump is used so that no contamination occurs. First, ensure that the "CONTROL POWER ON/OFF" switch on the electrical panel is in the OFF position beforehand. Failing to do so will cause the transfer pump to come on and pump deodorizer over from the Auxiliary Tank until it reaches its programmed setpoint. The "old" deodorizer should be disposed per the SDS.

Once the Evaporation Tank is empty, flush out with clean water and dispose in the same manner as the "old" deodorizer.

Using the portable pump, refill the Evaporation tank either from the auxiliary tank or directly from the adjacent drum/tote. DO NOT allow the intermittent transfer pump to refill the tank since it can lead to burning out the motor. Refill the tank up to 47%, which will be displayed on the LED readout on the blue Level Sensor located on top of the tank.

TROUBLESHOOTING

FAN FAULTED	Contact Byers Scientific & Manufacturing with VFD Fault Code for further information
TRANSFER PUMP FAULTED	Pump motor issue, contact for replacement
EVAPORATION/AUXILIARY TANK FAULTED	Possible hi-limit controller issue, contact Byers Scientific & Manufacturing for further information

CONTACT INFORMATION:

Byers Scientific & Manufacturing
2332 W. Industrial Park Drive
Bloomington, IN 47404
Phone: (812) 269-6218 E-mail: info@byers-scientific.com

WARRANTY

Byers Scientific & Manufacturing (Seller) warrants products of its own manufacture, against defects of material and workmanship under normal use and service for a period of SIXTY (60) months from date of installation. This warranty does not apply to any of Seller's products or any part thereof which has been subject to extraordinary wear and tear, accident, abuse, misuse, overloading, negligence or alteration. On products furnished by Seller, but manufactured by others, such as fan motors, Seller extends the same warranty as Seller received from the manufacturer thereof. Expenses incurred by Purchaser's in repairing or replacing any defective product will not be allowed except where authorized in writing and signed by an officer of the Seller.

ECOSORB CNB 100

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 12/04/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : ECOSORB CNB 100

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Odor Neutralizer

Recommended use : Odor Neutralizer

Restrictions on use : None known

1.3. Details of the supplier of the safety data sheet

Manufacturer
OMI Industries
1300 Barbour Way
Rising Sun, IN 47040 - U.S.A
T 1-847-304-9111

1.4. Emergency telephone number

Emergency number : 1-800-662-6367, Monday - Friday 8 am to 5 pm CST

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions. Keep out of reach of children.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Move to fresh air if necessary.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : None under normal use.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : No effects known.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Symptoms/effects upon intravenous administration : No other effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so.

6.1.1. For non-emergency personnel

Protective equipment : Gloves and safety glasses recommended.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.

Storage conditions : Store in a well-ventilated place. Keep cool.

Incompatible products : Oxidizing agent. Strong acids.

Incompatible materials : Keep away from strong acids and strong oxidizers.

Storage temperature : 4 - 29 °C 40°F and 85°F Allowing product to freeze may cause layering.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids. oxidizing agents.

Storage area : Keep container in a well-ventilated place. Store in a cool area. Keep out of direct sunlight. Store in a well-ventilated place.

Special rules on packaging : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : Gloves and safety glasses recommended.

Hand protection : Protective gloves. Recommended.

Eye protection : Safety glasses. Recommended.

Skin and body protection : None under normal use.

Respiratory protection : Respiratory protection not required in normal conditions.

Thermal hazard protection : Not applicable.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: White liquid.
Color	: White
Odor	: Characteristic odour
Odor threshold	: No data available
pH	: 6 - 8.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: ≈ 99 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: ≈ 0.99
Solubility	: Soluble in water.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: ≈ 1 cSt
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Oxidizing agent. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Dermal

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified
pH: 6 - 8.5

Serious eye damage/irritation : Not classified
pH: 6 - 8.5

Respiratory or skin sensitization : Not classified.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : No other effects known.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : No effects known.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Symptoms/effects upon intravenous administration : No other effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

ECOSORB CNB 100	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

ECOSORB CNB 100	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

ECOSORB CNB 100	
Ecology - soil	The product is predicted to have high mobility in soil. Soluble in water.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Avoid release to the environment.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

ALL COMPONENTS OF THIS PRODUCT ARE LISTED, OR EXCLUDED FROM LISTING, ON THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY

15.2. International regulations

CANADA

ECOSORB CNB 100
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

ECOSORB CNB 100
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

ECOSORB CNB 100
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

ABBREVIATIONS AND ACRONYMS:	
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
IARC	International Agency for Research on Cancer
OECD	Organisation for Economic Co-operation and Development
LD50	Median lethal dose
SDS	Safety Data Sheet
STP	Sewage treatment plant

Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B

B - Safety glasses, Gloves

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Byers Scientific & Manufacturing
Industrial Odor Management

2332 W. Industrial Park Drive
Bloomington, IN 47404
Ph: (812) 269-6218

WATERLESS VAPOR-PHASE SYSTEM FOR ODOR CONTROL

KEY FEATURES:

- Patent-pending Uniform Vapor-Distribution Technology ensures that a consistent and controllable level of product is dispersed via the perimeter piping
- Remote monitoring 24/7 by Byers Scientific staff on status of all machine operating parameters
- Rugged weather resistant enclosure capable of withstanding prolonged exposure to wind, rain and other elements
- UL Listed control panel is designed for site specific electrical requirements (e.g. 480 VAC, 3 Phase)
- Air filter replacement can be done safely from outside, no need to open/unlock door
- Product reservoir tank provides up to three weeks of uninterrupted operation before needing refill
- Key personnel receive email/SMS text notifications alerting of machine needs such as low tank level or air filter replacement
- Operational data are logged to provide evidence of compliance to local/state/federal agencies
- Optional weather station fully integrated with SCADA system available
- Utilizes Ecosorb® 607, a proprietary blend from OMI Industries that is specifically formulated for use in BS&M equipment
- Each system is custom designed and engineered for a client's site-specific characteristics
- Interior access via lockable 120-degree angle, gas assisted door for general machine maintenance such as product tank filling

Byers Scientific & Manufacturing
Industrial Odor Management

2332 W. Industrial Park Drive
Bloomington, IN 47404
Ph: (812) 269-6218

WATERLESS VAPOR-PHASE SYSTEM FOR ODOR CONTROL

SPECIFICATIONS

SYSTEM OVERVIEW

Footprint 74.5″ L x 59.0″ D x 63″ H

Decibels at 30 feet: 65 dB

Access Door with Intake Filter
- Filter Size: 18″ x 18″ x 1″ Nominal (Actual: 17.75″ x 17.75″ x 0.75″)

63 Gallon Storage Tank
- Internal circulation via eductors
- Level Sensor
- Temperature Sensor
- In-Tank Heater for Cold Climates
- Tank can be filled by toggle switch operated pump affixed to tote/drum

Evaporation Tank
- Patent-Pending Uniform Vapor Production
- Ultrasonic Booster
- Level Sensor
- Temperature Sensor
- In-Tank Heater
- Can produce up to 7 equivalent gallons of vapor/day
- Tank fills automatically via PLC

ELECTRIC

UL-LISTED PANEL

- 40 / 50 Amp Service Disconnect Switch
- Touch Screen Panel Display
- Indicator Lights
- Programmable Logic Controller (PLC) for Critical System Operations
- Industrial Remote Access Router with External Antenna
- High Limit Heat Safety Controllers

ELECTRIC (CONT'D)

3-PHASE COMPONENTS (208- 240 / 480VAC)

Main Blower
- 7.5 HP Motor
- 19.4 - 17.6 / 8.8 Full Load Amps
- 3530 RPM

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- 3450 RPM

In-Tank Heater(s)
- 2000 - 2660 / 3500 Watts
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36VAC COMPONENT

Ultrasonic Booster
- 8.2 Amps

24VDC COMPONENTS

Diaphram Pumps (3)
- 3.0 gallons per hour
- 3.5 Amps

Precalibrated Level Sensors (2)

Precalibrated Flow Meter with Totalizer

Precalibrated Differential Pressure Sensor
- Range: 0 - 2 inH_2O

Precalibrated Differential Pressure Sensor
- Range: 0 - 40 inH_2O

Temperature Sensors (2)

Attachment 2

Santa Barbara APCD May 2018 CAPCOA Presentation

Criterion Environmental, Inc.
1879 Portola Road
Suite K
Ventura, CA 93003

www.criterionenv.com

Phone: 805-644-8347
Fax: 805-644-5347
Email: info@criterionenv.com

Cannabis Odor Control Solutions

CAPCOA SPRING MEMBERSHIP MEETING

Santa Barbara County
Air Pollution Control District

Our Mission: To protect the people and the environment of Santa Barbara County from the effects of air pollution.

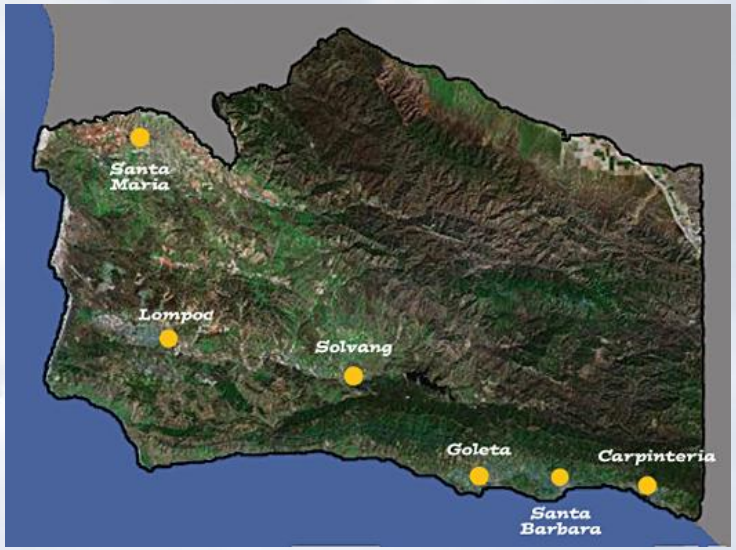
Aeron Arlin Genet
Director / APCO

May 15, 2018

Santa Barbara County
Air Pollution Control District

Cannabis in Santa Barbara County

- Santa Barbara County currently has the most temporary cannabis cultivation licenses in California[1,2]
- 52 cannabis cultivators in Carpinteria alone[3]
- Odor generated from cannabis cultivation is a significant nuisance issue for residents



Santa Barbara County Air Pollution Control District

1. https://www.independent.com/news/2018/mar/01/santa-barbara-cannabis-growers-hold-most-temporary/
2. Final Environmental Impact Report (EIR) for the Cannabis Land Use Ordinance and Licensing Program – Santa Barbara County
3. https://www.independent.com/news/2018/mar/23/santa-barbara-county-sets-cannabis-grow-cap/

Odors From Cultivation

- Odors produced during cannabis flowering stage
- For large-scale operations, significant portion of plants will be flowering at any given time
- Cannabinoids, Terpenes, Sesquiterpenes

Santa Barbara County
Air Pollution Control District

Odor Neutralizers

- Process works like this: chemical reaction occurs between the odors and compounds in the neutralizer to scrub the smell

- Neutralizer is converted into a vapor that gets dispersed
  - Odors “surf” the airstream
  - Odors & neutralizer more likely to meet if in the airstream together

- One example shown here: Ecosorb CNB 100 odor neutralizer

Santa Barbara County
Air Pollution Control District

Vapor-Phase Odor Control Technology

- Vapors go through PVC piping around perimeter of greenhouse
- PVC piping contains holes for release of odor neutralizer
- Size and number of holes unique to each installation but designed to minimize pressure drop

http://byers-scientific.com/assets/bsm-vapor-system-v01.pdf

Santa Barbara County
Air Pollution Control District

Odor Control System Process Flow

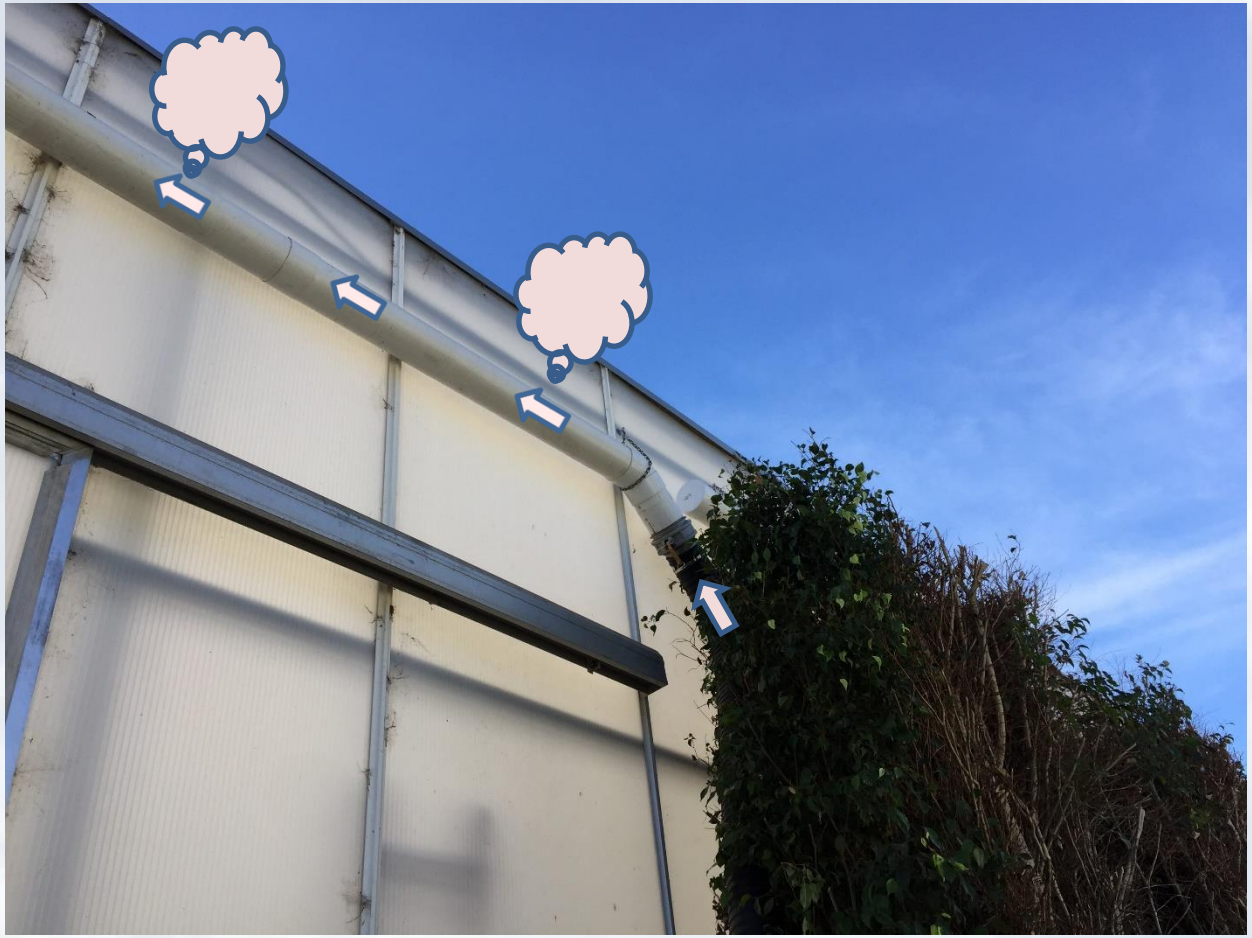
Holding Tank
(Ecosorb CNB 100)

High pressure, low volume blower

Evaporation Tank
(confidential)

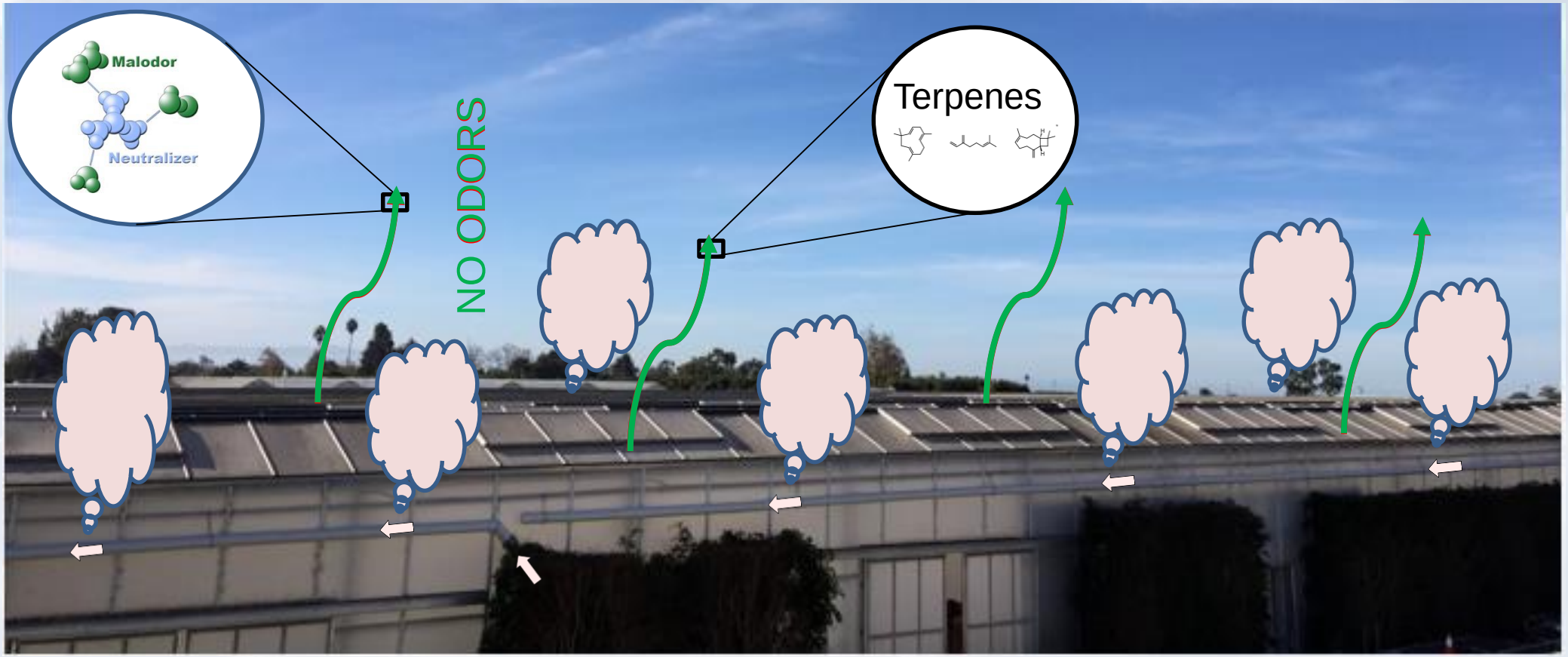
Santa Barbara County
Air Pollution Control District

Odor Control System Process Flow Cont.



Santa Barbara County
Air Pollution Control District

Odor Control System Process Flow Cont.



Watch smoke test https://youtu.be/sNEBCpQCgZY

Santa Barbara County
Air Pollution Control District

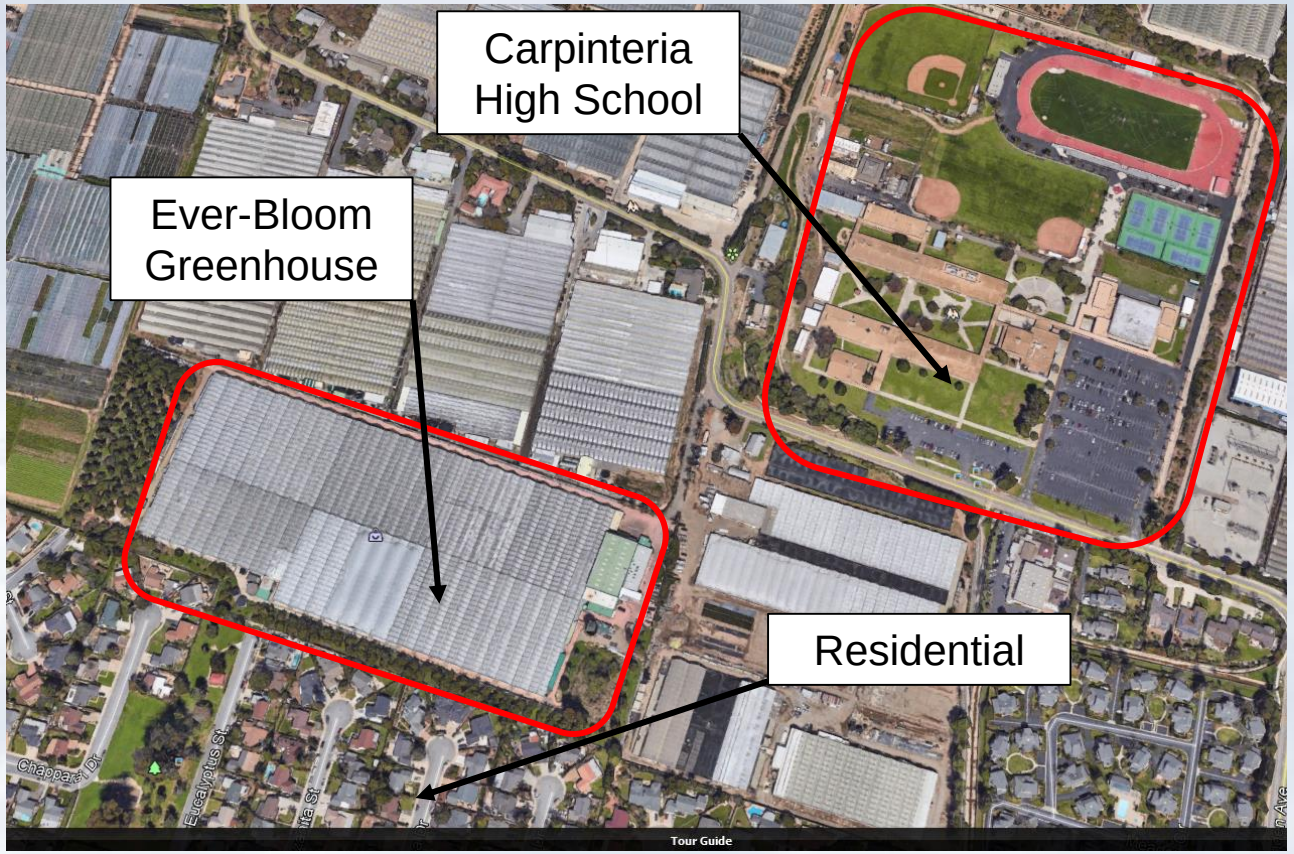
Considerations

- Ecosorb CNB 100 example:
  - Throughput ~ 3.5 gallons per day
  - A pine/citrus scent from overproduction of neutralizer vapor
  - Approximate capital cost $38,000 - $53,000, including installation
  - Annual operating cost (based on typical large-scale greenhouse operations) is $45,000 – $50,000 per year

Santa Barbara County
Air Pollution Control District

Ever-Bloom Test Case

- 15-acre greenhouse located near sensitive receptors
- 650,000 sq. ft cannabis growing operation, previously grew flowers
- Installed a Byers-Scientific & Manufacturing vapor-phase odor control system in November 2017



Santa Barbara County Air Pollution Control District

Ever-Bloom Test Case Cont.

- Ever-Bloom invited District staff to inspect odor-control system in February 2018
- District staff toured the greenhouse and odor-control system
- Odor-control system was operating during the visit and appeared to be working as advertised
- Pungent odors from inside the greenhouse could not be detected directly outside the greenhouse or at the property line

Santa Barbara County
Air Pollution Control District

Other Applications

- System currently installed at 14 cannabis operations in Carpinteria

- System can be used to control odors from:
  - Solid Waste (landfills, waste transfer stations, compost, pulp & paper)
  - Wastewater Treatment
  - Commercial (food waste, trash compactors, food processing)
  - Agricultural (dairy, poultry and hog farming)

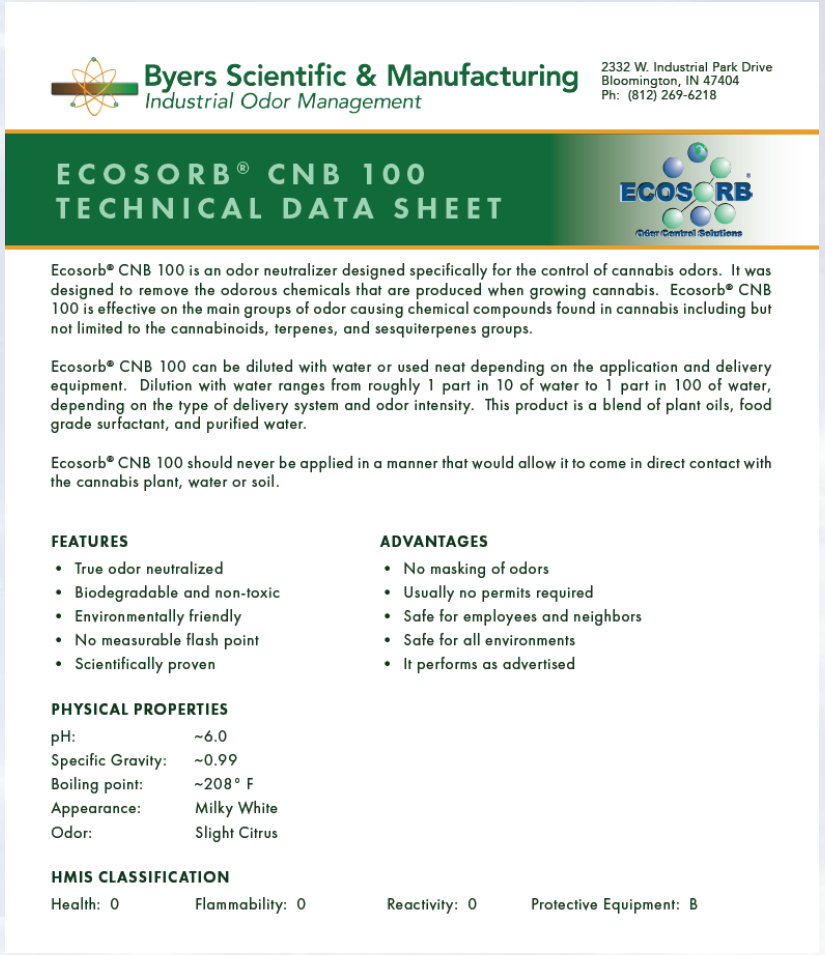
- Also operational at Miramar Landfill in San Diego as well as composting and landfill operations throughout the US

Santa Barbara County
Air Pollution Control District

Questions

Santa Barbara County
Air Pollution Control District

Ecosorb CNB 100 Data Sheet



Byers Scientific & Manufacturing
Industrial Odor Management

2332 W. Industrial Park Drive
Bloomington, IN 47404
Ph: (812) 269-6218

ECOSORB® CNB 100 TECHNICAL DATA SHEET

Ecosorb® CNB 100 is an odor neutralizer designed specifically for the control of cannabis odors. It was designed to remove the odorous chemicals that are produced when growing cannabis. Ecosorb® CNB 100 is effective on the main groups of odor causing chemical compounds found in cannabis including but not limited to the cannabinoids, terpenes, and sesquiterpenes groups.

Ecosorb® CNB 100 can be diluted with water or used neat depending on the application and delivery equipment. Dilution with water ranges from roughly 1 part in 10 of water to 1 part in 100 of water, depending on the type of delivery system and odor intensity. This product is a blend of plant oils, food grade surfactant, and purified water.

Ecosorb® CNB 100 should never be applied in a manner that would allow it to come in direct contact with the cannabis plant, water or soil.

FEATURES

- True odor neutralized
- Biodegradable and non-toxic
- Environmentally friendly
- No measurable flash point
- Scientifically proven

ADVANTAGES

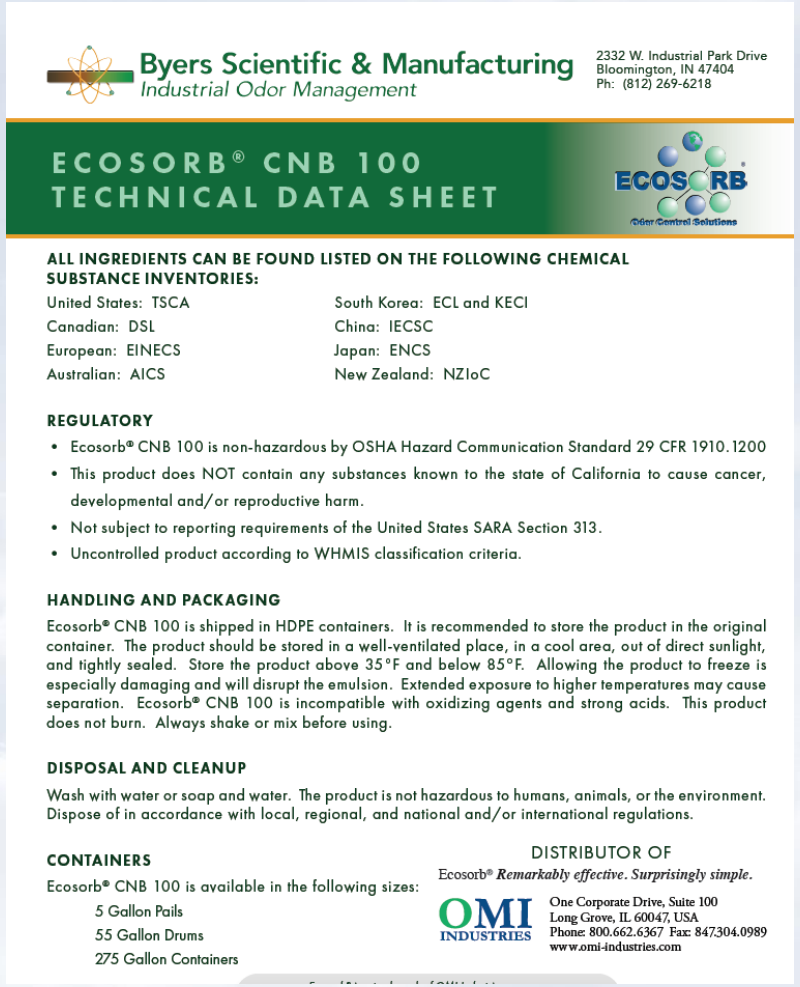
- No masking of odors
- Usually no permits required
- Safe for employees and neighbors
- Safe for all environments
- It performs as advertised

PHYSICAL PROPERTIES

pH:	~6.0
Specific Gravity:	~0.99
Boiling point:	~208° F
Appearance:	Milky White
Odor:	Slight Citrus

HMIS CLASSIFICATION

Health: 0 Flammability: 0 Reactivity: 0 Protective Equipment: B



Byers Scientific & Manufacturing
Industrial Odor Management

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Bloomington, IN 47404
Ph: (812) 269-6218

ECOSORB® CNB 100 TECHNICAL DATA SHEET

ALL INGREDIENTS CAN BE FOUND LISTED ON THE FOLLOWING CHEMICAL SUBSTANCE INVENTORIES:

United States: TSCA	South Korea: ECL and KECI
Canadian: DSL	China: IECSC
European: EINECS	Japan: ENCS
Australian: AICS	New Zealand: NZIoC

REGULATORY

- Ecosorb® CNB 100 is non-hazardous by OSHA Hazard Communication Standard 29 CFR 1910.1200
- This product does NOT contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.
- Not subject to reporting requirements of the United States SARA Section 313.
- Uncontrolled product according to WHMIS classification criteria.

HANDLING AND PACKAGING

Ecosorb® CNB 100 is shipped in HDPE containers. It is recommended to store the product in the original container. The product should be stored in a well-ventilated place, in a cool area, out of direct sunlight, and tightly sealed. Store the product above 35°F and below 85°F. Allowing the product to freeze is especially damaging and will disrupt the emulsion. Extended exposure to higher temperatures may cause separation. Ecosorb® CNB 100 is incompatible with oxidizing agents and strong acids. This product does not burn. Always shake or mix before using.

DISPOSAL AND CLEANUP

Wash with water or soap and water. The product is not hazardous to humans, animals, or the environment. Dispose of in accordance with local, regional, and national and/or international regulations.

CONTAINERS

Ecosorb® CNB 100 is available in the following sizes:

5 Gallon Pails
55 Gallon Drums
275 Gallon Containers

DISTRIBUTOR OF
Ecosorb® *Remarkably effective. Surprisingly simple.*

OMI INDUSTRIES
One Corporate Drive, Suite 100
Long Grove, IL 60047, USA
Phone: 800.662.6367 Fax: 847.304.0989
www.omi-industries.com

Santa Barbara County
Air Pollution Control District

Attachment 3

December 8, 2017; CPF Associates Screening Health Assessment of Waterless Vapor Phase Odor Control Technology

Criterion Environmental, Inc.
1879 Portola Road
Suite K
Ventura, CA 93003

www.criterionenv.com

Phone: 805-644-8347
Fax: 805-644-5347
Email: info@criterionenv.com

MEMORANDUM

TO: **Marc Byers, Byers Scientific & Manufacturing**
FROM: **Sarah Foster, CPF Associates, Inc.**
DATE: **December 8, 2017**
RE: **Screening Health Assessment of Waterless Vapor Phase Odor Control Technology**

INTRODUCTION AND SUMMARY

Byers Scientific & Manufacturing has developed a waterless vapor phase odor control technology which releases an Ecosorb® odor control product in gaseous form. Byers requested CPF Associates to conduct a health assessment of this system to evaluate its potential air impacts relative to inhalation criteria derived to be protective of public health. This memo describes the health assessment and its conclusions.

The application scenario evaluated in this study was defined by Byers. It assumed that Ecosorb® CNB 100, a proprietary odor control product, would be fed into the vapor phase odor control technology at a rate of 2.5 gallons per day and, once volatilized, would be distributed as a gas through a pipe. Air flow through the pipe would be generated by a fan set at roughly 300 cubic feet per minute and the product would be released from upward-facing holes spaced at nine foot intervals along the length of the pipe. The pipe would be placed around the outside perimeter of a building at a height of 10-15 feet (3.0-4.6 m). The total pipe length would vary from about 575-3,150 feet (175-960 m), depending on the building's footprint. The composition of CNB 100 was provided to CPF by its manufacturer, OMI Industries, under the understanding that this is confidential business information.

The assessment was a screening-level evaluation that relied on conservative, health-protective assumptions. These assumptions are expected to overestimate potential air concentrations, exposures and risks associated with the evaluated scenario.

The assessment showed that operation of the Byers-defined application scenario would not be expected to pose public health concerns. Potential air concentrations calculated using a screening-level model in the immediate vicinity of the distribution pipe were below available health-protective inhalation criteria.

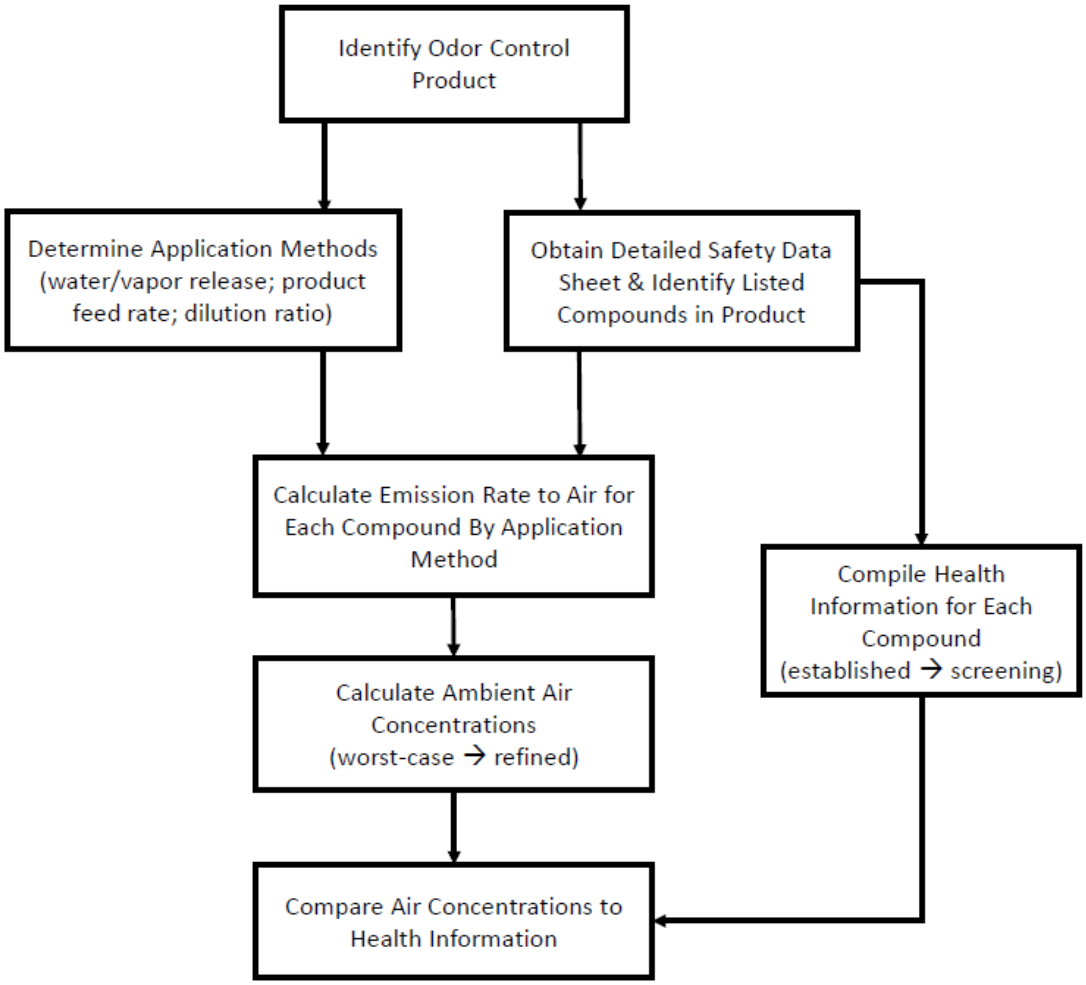
SCREENING HEALTH ASSESSMENT

Methodology

CPF has developed a methodology to evaluate odor control product use at landfills and other potentially odiferous facilities. This methodology is based on well-accepted health risk assessment principles and has been used to objectively assess more than one dozen odor control products delivered using a variety of application systems.

A flow chart of the methodology is provided in Figure 1. Broadly defined, the methodology combines information about odor control product composition, odor control application methods, health effects information and modeled ambient air concentrations to evaluate the potential for public health concerns via inhalation.

Figure 1
Overview of Odor Control Product Health Assessment Methodology



Consistent with standard health risk assessment practice, the methodology can be applied in a stepwise fashion of increasing refinement, as warranted. The initial screening-level evaluation employs conservative, health-protective assumptions which are intended to overestimate potential air concentrations, exposures and potential risks. If the screening-level evaluation does not demonstrate a potential for health concerns, then no further assessment is needed. If not, more refined evaluations can be performed to further evaluate an odor control system under more realistic conditions.

Assessment of Byers Vapor Phase Odor Control System

Application Method

In this assessment, a screening-level evaluation was conducted of an application setup defined by Byers. It was assumed that Ecosorb® CNB 100, an odor control product, would be fed into the vapor phase odor control technology at a rate of 2.5 gallons per day and, once volatilized, would be distributed as a gas inside a pipe of variable length, with air flow generated by a fan set at roughly 300 cubic feet per minute. The pipe would be placed around the outside perimeter of a building, close to but below the roof edge, at a height of 10-15 feet (3.0-4.6 m) and the total pipe length would vary from about 575-3,150 feet (175-960 m), depending on the footprint of the building. The vapor would be released from holes, each roughly 0.16 inch (4 mm) in diameter and facing upwards, placed every nine feet along the pipe length. Due to the pressure created by the fan, the vapor is expected to be emitted at a velocity of more than 100 ft/sec (>45 m/sec) from each hole.

Odor Control Product

The odor control product evaluated was Ecosorb® CNB 100. Its composition was provided to CPF by its manufacturer, OMI Industries, under the understanding that this is confidential business information. The product is comprised of two polysorbate surfactants and a blend of citrus and pine oils with the remainder being water.[1] Both polysorbate surfactants are widely used in hundreds of industrial, consumer, medicinal and personal care products. The Safety Data Sheet (SDS) for CNB 100 is provided in Attachment A. This SDS includes information about the product, its hazards and instructions for handling, disposal, transport, first-aid, fire-fighting and exposure control measures.

Emission Rates into Air

Emission rates into air for the product as a whole and its individual constituents were calculated based on the application setup described above and the Ecosorb® CNB 100 composition. The method for calculating emission rates was designed to ensure that potential air impacts would be overestimated in the interests of health protectiveness. First, it was assumed that 100% of the product would be volatilized in the odor control technology and transported down the distribution pipe. Second, each constituent in CNB 100 was assumed to be present at the maximum percentage provided by OMI. Third, the calculated emission rates from all holes were summed and the resulting cumulative emission rate was then assumed to be released from a shorter section of pipe on only one side of a building, rather than dispersed along the entire pipe surrounding all four building sides. Overall, these assumptions are expected to overestimate potential emission rates, and thus also air concentrations.

Ambient Air Concentrations

Potential air concentrations were calculated in the immediate vicinity of the distribution pipe using a screening method called a box model. This approach assumes that emissions are completely mixed in a

[1] The percentages of each polysorbate surfactant and the citrus/pine oil blend in Ecosorb CNB 100 are a proprietary trade secret, however, they were provided to CPF for the purposes of this analysis. In accordance with a Confidentiality Agreement, this composition is not specifically provided in this memo. The product's Safety Data Sheet is included in Attachment A.

box having a specified width and height through which wind is blowing.[2] It is generally considered more likely to overestimate than underestimate concentrations because the model does not take into account air mixing and dispersion outside the box, atmospheric reactions or settling (deposition). All of these processes, which naturally occur in the outdoor environment, would result in lower concentrations than those modeled. As a result, the air concentrations due to emissions are expected to be overestimated.

For this assessment, the box was defined to conservatively estimate potential air concentrations that might occur in the immediate vicinity of the distribution pipe (i.e., within roughly 15 feet). It was assumed to extend outward 15 feet (4.57 m) from the side of the building and upwards to a building height of 18 feet (5.5 m), with air flowing through this cross-section at a velocity of 1 mile per hour (0.447 m/sec), representative of a calm wind speed. Air concentrations would be lower if a larger box and higher wind speed were used.[3]

Health Criteria for Odor Control Product

The next step in the assessment involved compilation of available health criteria for the odor control product and its constituents. These criteria reflect concentrations in air (in mg/m^3) or average daily intakes (in mg/kg body weight/day) that are protective of public health. They are developed by regulatory agencies and public health scientists based on scientific information about the toxicity of chemical substances. When these values are derived, safety factors are generally incorporated to ensure that they are protective of human health.

Numerous information sources were searched to identify available health effects criteria.[4] Criteria were able to be identified for all constituents in Ecosorb® CNB 100 - either for the listed constituent itself (each polysorbate surfactant) or for a component in the constituent (citrus and pine oil blend). For example, for the blend of pine and citrus oils, dominant components in orange, lime, lemon, tangerine, grapefruit and pine oils were identified from published studies, and then acute short-term inhalation criteria were compiled as available for each of these. Among the dominant components, acute short-term inhalation criteria were available for limonene, α-terpineol, and α- and β-pinene. The lowest among these three criteria (59 mg/m^3) was selected to evaluate the entire oil blend.

In addition to identifying criteria for constituents in Ecosorb® CNB 100, the results from acute inhalation toxicity studies were used to derive an inhalation criterion for the product as a whole. Acute inhalation toxicity studies have been conducted for two Ecosorb® products that are used to

[2] American Society for Testing and Materials (ASTM). 1994. Emergency Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites. Philadelphia, PA. ES 38-94.

[3] The equation for calculating air concentrations in the simple well-mixed box model is: Ca = (ER*1,000)/(H*W*V), where Ca = Air concentration (mg/m^3), ER = Emission rate (g/sec), 1,000 = Conversion factor (1,000 mg/g), H = Box height (5.5 m), W = Box width (4.57 m), and V = Air velocity through box (0.447 m/sec).

[4] Information sources searched included: California Environmental Protection Agency (CALEPA) Reference Exposure Levels (RELs), US Environmental Protection Agency's (USEPA) Risk-Based Screening Levels (RSLs), USEPA's Acute Exposure Guideline Levels (AEGLs), American Industrial Hygiene Association's Emergency Response Planning Guidelines (ERPGs), Temporary Emergency Exposure Limits (TEELs) developed by the DOE Office of Emergency Management, US National Library of Medicine PubChem databases, European Union and European Food Safety Authority assessments on food additives, Safety Assessments prepared by Cosmetic Ingredient Review Expert Panels, and Japan Food Safety Commission reports on food additives.

formulate CNB 100 (Ecosorb® 606 and Ecosorb® 206). The acute inhalation toxicity studies examined the occurrence of adverse effects on rats exposed to each product for four hours at a high concentration in aerosolized form (2,220 mg/m^3 for Ecosorb® 606 and 2,080 mg/m^3 for Ecosorb® 206). Observations of the test animals for 12 different health endpoints (ranging from lacrimation to tremors to death) were tabulated during the exposure period and for 14 days after the exposure ceased. No adverse effects were observed at either tested air concentration. The lowest of the two no observed adverse effect levels (NOAELs) was divided by an uncertainty factor of 100 to derive the criterion for this assessment (21 mg/m^3). [5]

Compare Air Concentrations to Health Information

The potential for a health concern was evaluated by comparing the calculated air concentrations to the health information. If the calculated air concentration for a compound or odor control product is lower than the corresponding inhalation health criterion, adverse public health effects would not be expected to occur under the assumed odor control application scenario. If an air concentration exceeds its criterion, this does not mean that adverse effects will occur among the general public because of the conservative assumptions included in both the derivation of the criterion and the calculation of air concentrations. Rather it indicates that further investigation may be warranted, using more refined and realistic assumptions, to help determine whether or not levels in air may present a potential public health concern.

In this analysis, the potential air concentrations calculated in the immediate vicinity of the distribution pipe were below the available health-protective criteria. As noted above, the air concentrations were calculated using a screening-level box model and assuming total emissions from a pipe around four sides of a building were all released from a shorter section of pipe along only one side of a building. The calculated air concentration of the product as a whole was two times lower than its criterion. The concentrations of the individual constituents in CNB 100 were lower than their respective criteria by factors of 370 to 1,760.

Discussion of Uncertainties

The results of health assessments inherently reflect some uncertainty because of the complexities involved in the analysis. In accordance with standard practice, key uncertainties affecting this assessment are discussed here. In general, uncertainties in health assessments, including this one, are addressed by using conservative (i.e., health protective) assumptions which collectively produce results much more likely to be overestimated than underestimated. This adds a margin of safety to the results.

Conservative assumptions used in this assessment have been noted above, such as concentrating all emissions from a pipe around four sides of a building into one pipe section along only one building side, assigning small dimensions (i.e., 15 feet by 18 feet) to the simple box model, assuming each constituent was present in the product at the maximum percent noted by OMI, and assessing the blend of citrus and pine oils using only the lowest available inhalation health criterion among those for dominant components of these oils. Deriving a health-protective criterion for the product as whole

[5] Consistent with screening-level methods for deriving reference air concentrations, the uncertainty factor of 100 incorporated one factor of 10 for animal to human extrapolation and another factor of 10 for human variability.

based on a NOAEL from a toxicity study that evaluated only one exposure level was another conservative assumption, because the actual NOAEL may be much higher. Some uncertainties were not explicitly addressed in this study, such as whether the form of emissions might vary in extremely cold temperatures (e.g., gas versus aerosols), whether the composition of volatilized constituents might vary after long periods of operation and the effect of buildings on dispersion and mixing of emissions. The modeling of air concentrations was conducted for one building using a simple screening-level model with conservative input assumptions; more refined calculations of potential air concentrations could be estimated using more sophisticated methods (e.g., refined air dispersion modeling, wind tunnel modeling or computational fluid dynamic modeling). Overall, these uncertainties are not expected to change the conclusions of this assessment.

This assessment addressed only the inhalation route of exposure with a focus on the general public. Not considering other exposure routes (e.g., dermal) is appropriate given that the general public would not be expected to come into contact with the odor control product in any manner other than through the air. With respect to occupational situations, which were not addressed here, this product should only be used in accordance with its SDS, any label instructions, and regulatory requirements of Cal/OSHA.

Conclusions

Based on the methods and assumptions used, this screening-level assessment showed that operation of the Byers-defined application scenario would not be expected to pose public health concerns. Potential air concentrations calculated using a screening-level model in the immediate vicinity of a distribution pipe were below available health-protective inhalation criteria. The calculated air concentration of the product as a whole was two times lower than its criterion. The concentrations of evaluated individual constituents in CNB 100 were lower than their respective criteria by factors of 370 to 1,760.

ABOUT CPF ASSOCIATES

CPF Associates, Inc. is an independent Maryland-based scientific and research consulting firm with in-depth experience and expertise in the health and environmental evaluation of air emission sources, waste management technologies, industrial facilities and waste sites. CPF applies state-of-the-art scientific tools - risk assessment, life-cycle analysis, epidemiology and environmental impact analysis - to address public health and environmental issues. In over 30 years of professional association, the CPF Principals have conducted hundreds of projects for energy-from-waste (EfW) facilities, landfills, incinerators, biosolids management facilities, recycling plants, transfer stations and other types of treatment units. The principal investigator for this assessment was Ms. Sarah Foster, a Principal with CPF Associates. Internal review was provided by Dr. Paul Chrostowski, also a Principal with CPF.

ATTACHMENT A

SAFETY DATA SHEET

ECOSORB CNB 100

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 12/04/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : ECOSORB CNB 100

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Odor Neutralizer

Recommended use : Odor Neutralizer

Restrictions on use : None known

1.3. Details of the supplier of the safety data sheet

Manufacturer
OMI Industries
1300 Barbour Way
Rising Sun, IN 47040 - U.S.A
T 1-847-304-9111

1.4. Emergency telephone number

Emergency number : 1-800-662-6367, Monday - Friday 8 am to 5 pm CST

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions. Keep out of reach of children.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Move to fresh air if necessary.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : None under normal use.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : No effects known.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Symptoms/effects upon intravenous administration : No other effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so.

6.1.1. For non-emergency personnel

Protective equipment : Gloves and safety glasses recommended.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.

Storage conditions : Store in a well-ventilated place. Keep cool.

Incompatible products : Oxidizing agent. Strong acids.

Incompatible materials : Keep away from strong acids and strong oxidizers.

Storage temperature : 4 - 29 °C 40°F and 85°F Allowing product to freeze may cause layering.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids. oxidizing agents.

Storage area : Keep container in a well-ventilated place. Store in a cool area. Keep out of direct sunlight. Store in a well-ventilated place.

Special rules on packaging : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : Gloves and safety glasses recommended.

Hand protection : Protective gloves. Recommended.

Eye protection : Safety glasses. Recommended.

Skin and body protection : None under normal use.

Respiratory protection : Respiratory protection not required in normal conditions.

Thermal hazard protection : Not applicable.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: White liquid.
Color	: White
Odor	: Characteristic odour
Odor threshold	: No data available
pH	: 6 - 8.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: ≈ 99 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: ≈ 0.99
Solubility	: Soluble in water.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: ≈ 1 cSt
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Oxidizing agent. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Dermal

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified
pH: 6 - 8.5

Serious eye damage/irritation : Not classified
pH: 6 - 8.5

Respiratory or skin sensitization : Not classified.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : No other effects known.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : No effects known.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Symptoms/effects upon intravenous administration : No other effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

ECOSORB CNB 100	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

ECOSORB CNB 100	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

ECOSORB CNB 100	
Ecology - soil	The product is predicted to have high mobility in soil. Soluble in water.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Avoid release to the environment.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

ALL COMPONENTS OF THIS PRODUCT ARE LISTED, OR EXCLUDED FROM LISTING, ON THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY

15.2. International regulations

CANADA

ECOSORB CNB 100
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

ECOSORB CNB 100
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

ECOSORB CNB 100
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

ABBREVIATIONS AND ACRONYMS:	
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
IARC	International Agency for Research on Cancer
OECD	Organisation for Economic Co-operation and Development
LD50	Median lethal dose
SDS	Safety Data Sheet
STP	Sewage treatment plant

Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B

B - Safety glasses, Gloves

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Attachment 4

Carbon Filter Specifications

Criterion Environmental, Inc.
1879 Portola Road
Suite K
Ventura, CA 93003

www.criterionenv.com

Phone: 805-644-8347
Fax: 805-644-5347
Email: info@criterionenv.com

Can-Lite 10" 1500 CFM

SHARE PRINT

SKU: 700592

Built for convenience and long life.

At a Glance

Can-Filter® has designed and built the Can-Lite™ for convenience and long life. 100% Australian Granulated carbon, aluminum top and bottom, integrated flange and 51% open perforation are features of the Can-Lite™ filter. The Can-Lite™ is available in 12 sizes with a CFM range of 89 – 3000. Can-Lite™ is manufactured in a dedicated carbon filter plant in North America. Each filter is shrink wrapped, boxed and labeled for ease of use.

Details

- Made in North America
- 12 sizes from 89 – 3000 CFM, largest in industry
- Low pressure drop even on smaller sizes
- Lightweight Australian Granular carbon
- 2" Carbon bed
- 51% open perforation for maximum airflow

CAN-LITE FILTERS

SOURCEBOOK 6

Country: United States ▼

SUPERIOR PERFORMANCE

The Original Can-Filters® canfilters.com

Simply the Best

Accept No Imitations

Made in North America

Home > Filters > Can-Filters > Can 150

Can 150

sku: 358700

msrp:
$433.06

At a Glance

The Original Can-Filters are designed for the control of VOCs (paint fumes, hydrocarbons, ect...), odors, and other gaseous contaminants. Built with the same proven packed bed design and pelletized virgin activated carbon we've used for 30 years, this line of time tested activated carbon air filters sets the standard for long life, consistent performance, and low presure drop. Rated at a conservative 0.1 sec contact time, the Original Can-Filters provide excellent value and confidence.

Details:

- Made in North America
- 7 sizes from 33-150cm, largest in industry
- You pick the flange that's right for you
- Low pressure drop even on smaller sizes
- Pelletized carbon delivers the cleanest filter available
- 2.5" Carbon bed, thickest in industry
- Flange comes seperate to fit a wide range of fans and applications

Technical Data:

- Max Exhaust CFM: 1260 cfm / 2100 m^3h @ 0.1 sec contact time

- Max Recirculating (Scrubbing) CFM: 2520 cfm / 4200 m³h
- Recommended Min Airflow: 630 cfm / 1056 *m³/h*
- Prefilter: Yes
- Flange: 10", 12", 14"
- Dimensions: (with pre-filter)
- Outside Diameter: 42cm / 16.5"
- Height: 150cm / 60"
- Total Weight: 71kg / 156lbs
- Carbon Weight: 56kg / 123lbs
- Carbon Bed Depth: 6.5cm / 2.56"
- Max Operating Temp: 80°C
- Pressure drop at max cfm: 180pa / .75"wg

Recommended Fans:

Exhaust:

Can-Fan 10" HO

Pro-Series 8" *(speed 1, 2, 3)*

Max-Fan 8" HO *(speed 1, 2, 3)*

Max-Fan 10"

Q-Max 10" *(speed 1, 2, 3)*

Can-Fan 12" HO

Max-Fan 14"

Recirculating:

Q-Max 12"

Max-Fan 12"

Max-Fan 14" HO

YOU MAY ALSO BE INTERESTED IN THE FOLLOWING PRODUCT(S)

14" Flange 100/125/150

Can 150 Pre-Filter

14" Max-Fan™

Attachment 5

Air Curtain Specifications

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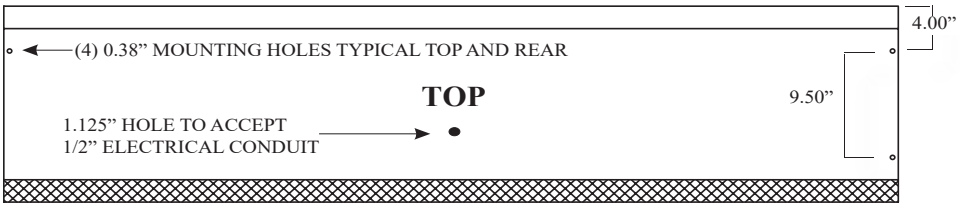
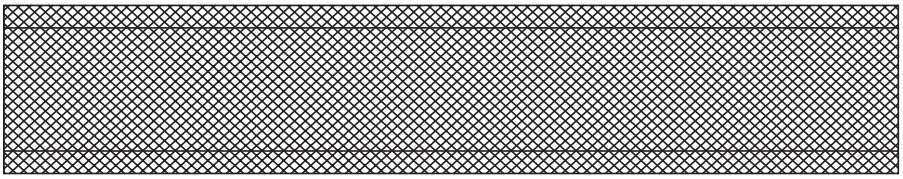
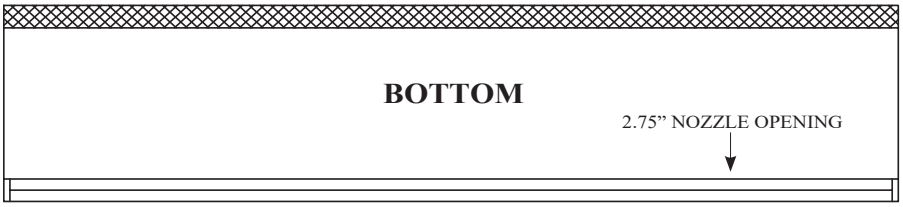
CAN-LITE FILTERS

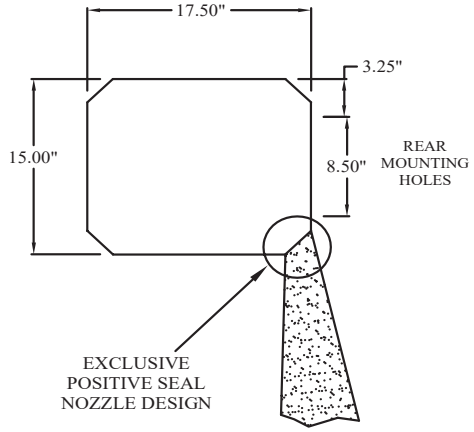
Air Curtain Model RCC





FRONT





MODEL NUMBER	RCC-1-36 (E)	RCC-1-42 (E)	RCC-1-48 (E)	RCC-1-60 (E)	RCC-2-60 (E)	RCC-2-72 (E)	RCC-2-84 (E)	RCC-2-96 (E)	RCC-3-108 (E)	RCC-3-120 (E)	RCC-3-132 (E)	RCC-4-144 (E)
OVERALL WIDTH	37	43	49	61	61	73	85	97	109	119	134	146
NOZZLE WIDTH	36	42	48	60	60	72	84	96	108	118	133	145
MOUNTING WIDTH	36 1/16	42 1/16	48 1/16	60 1/16	60 1/16	72 1/16	84 1/16	96 1/16	108 1/16	118 1/16	133 1/16	145 1/16

Attachment 6

Pacific Grown Organics Harvesting Standard Operating Procedures

Criterion Environmental, Inc.
1879 Portola Road
Suite K
Ventura, CA 93003

www.criterionenv.com

Phone: 805-644-8347
Fax: 805-644-5347
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CAN-LITE FILTERS

Attachment 6

Activity 8: **Harvesting Standard Operating Procedures (SOP)**

Facility Prep

Harvest Manager Actions:

Before beginning Cannabis Harvesting, carefully inspect the facility and equipment associated with harvesting, and please complete the following checklist:

1. Drying facility auxiliary doors are closed, “KEEP CLOSED” signs are in place
2. Drying room doors are open, air curtains are on and functioning properly
3. Interior HVAC is on and functioning properly
4. Greenhouse air curtains are on and functioning properly
5. Byers Odor System is on and functioning properly
6. Drying facility air filtration system is operational
7. Odor Carts are in good operating condition:
    a. Curtain is intact without tears or other damage
    b. Curtain closes completely to the sides of the cart with no gaps
    c. Wheels are clear of debris and rolling easily

Employee Harvest Team Meeting: Review the following key SOPs with all staff and stress the importance of strict compliance for odor control.

1. When cannabis has been loaded onto the Odor Cart and is prepared for transfer from greenhouse to Drying Facility, the odor curtains MUST remain closed and locked until the sealed Odor Cart is INSIDE the odor controlled drying facility and facility doors are closed.
2. Before an Odor Cart leaves the greenhouse, confirm there is a clear path of travel from the Greenhouse into the drying facility, ensuring there are no carts waiting to enter the drying facility or other obstacles that could delay delivery.
3. Before the odor cart leaves the greenhouse, confirm there is no cannabis debris on the wheels.
4. Before carts leave the drying facility after being unloaded, ensure there is no cannabis debris at the bottom of the cart or on the wheels. Reseal the cart’s odor curtain.

TASK 8: **Flowering Plants Harvest:**

Harvest Manager:

Step 8A: **Pre-harvest**: Monitor plants and check trichome development as they near completion for their life cycle. Plants that are classified as Indica dominant typically reach maturity after the 8th week of flowering and Sativa dominant plants typically reach maturity after the 10th week of flowering. The flowering life-cycle begins when the light cycle of the day is less than 12 hours, meaning there is over 12 hours of darkness. Indicators of a plant reaching maturity is based on the trichomes darkening and having an amber coloration.

Greenhouse Harvest Team:

Step 8B: **De-leaf**: Once the plants have reached maturity they can be harvested by being cut down. Stripping the fan leaves may be done prior to harvest to reduce the amount of un-useable cannabis biomass. Fan leaves are identified as being the larger leaves that have little to no resin content. Refer to Harvest Manager for fan leaf and biomass management.

Step 8C: **Cut:** Begin cutting away the trellis and freeing the plant. Clear the plant so it can be cut at the base 3 inches from the soil and removed in one piece. If the plant breaks or hanging in one piece is not an option, remove sections by cutting at the elbows of the plant.

Step 8D: **Hang:** Once cut, hang the whole plant inside the Odor Cart. Once the cart is full, seal the odor cart by rolling down the curtains, and ensuring the magnets are in place and the entire curtain edge is sealed against the cart.

Step 8E: **Transport:** Ensure cart is sealed, wheels are clear, and there is a clear path to the Drying Room. Push or pull cart into the Drying Room. Do not stop outside and move directly from Greenhouse to Drying Facility.

Step 8F: **Weigh:** Push the Odor Cart on to the scale inside the Drying Room. The Weigh Master or a representative of the Weigh Master will ensure the wet weight is recorded properly and documented. Drying Room Team go to Step 8H.

Step 8G: **Return:** Ensure the Odor Cart is clear of all cannabis biomass, both inside and outside. Seal curtains and Return Odor Cart directly to the greenhouse to repeat process 8C to 8F.

Drying Room Team:

Step 8H: **Elbow and Hang:** Once cannabis has been transported, weighed, and documented, cut full cannabis plants into branches just above each joint, or elbow. Hang on mesh in the appropriate area indicated by the Weigh Master.

Step 8I: **Drying:** Drying Cannabis should not have direct airflow on the plants and instead should have a slow and steady negative air pressure in the sealed dark drying environment to preserve terpene content.

Step 8J: **Drying Complete:** Once dried for seven to ten days, the Cultivation Director will determine the beginning of the curing process.

Step 8K: **Buck:** Once drying cannabis has been determined to be ready to be cured by the Cultivation Director, remove the elbowed branches from the mesh and strip the buds from the stock. All water leaves will be removed at this time. Buds are stored in plastic totes in the Processing Room.

Step 8L: **Burp:** Bucked cannabis should remain inside the totes for 10 to 14 days, being opened and churned daily to allow Cannabis to breathe over the course of the curing period.

Step 8G : **Package:** Once the product has been adequately cured the weights will be measured as outlined in the Record-Keeping Standard Operating Procedure and allotted into strain specific 5 pound increments. Product should be stored in accordance with the Storage Standard Operating Procedures.