Cresco/SLO Cultivation- Carpinteria Odor Management Plan

Prepared for:

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1.0 ODOR MANAGEMENT PLAN

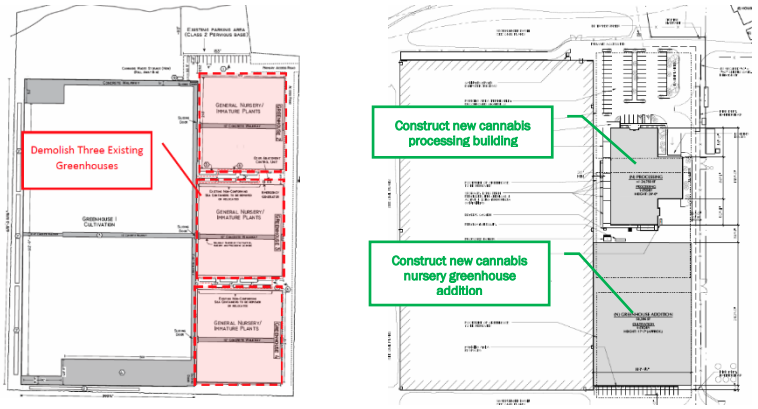
This Odor Management Plan (Plan) has been prepared in compliance with applicable local and State regulations for the purposes of minimizing nuisance odors related to the cultivation of cannabis associated with the operations of Cresco/SLO Cultivation (Operator) in Carpinteria, California. The Project Site (Site) is located at 3861 Foothill Road also identified as APN 005-310-024. The Site is approximately 13.66 acres in size and currently contains four (4) existing greenhouse structures and twelve (12) pre-fabricated supporting structures (freezers, equipment & material storage, etc.), totaling approximately 389,800 square feet of development. As described in further detail below, the Site will be redeveloped to retain the largest existing greenhouse, demolish three (3) existing greenhouses, develop a new greenhouse addition for nursery space, and develop a new cannabis processing support building. Surrounding land uses include agriculture (predominantly greenhouses and orchard) to the North, South, East, and West. Low density residential development is located approximately 400 feet to the Northeast. The Site is also bordered by an ephemeral drainage along the Northern extent of the subject property. Refer to Attachments 1 and 2 for further site development and use details.

1.1 PROJECT DESCRIPTION

As it pertains to odor emitting activities, the proposed Project would allow for:

1. Utilization of existing **Greenhouse 1 (GH1),** approximately 264,500 square feet in size, for mature mixed-light cannabis cultivation.
2. Demolition of three (3) existing greenhouses, known as **Greenhouse 2 (GH2)**, **Greenhouse (GH3**), and **Greenhouse 4 (GH4),** which are approximately 40,700 square foot each. Remove twelve (12) pre-fabricated containers.
3. Development and operation of a 61,840 square foot addition to **GH1** for nursery/juvenile mixed-light cannabis cultivation.
4. Development of a new 24,751 square foot pack house which will be utilized for cannabis processing (bucking, drying, and packaging).

Figure 1- Before & After Site Comparison



1.2 ODOR EMITTING ACTIVITIES

Figure 2- Existing Greenhouse 1 Exterior

GH1 will contain a mature/adult-flower cultivation area of approximately 264,500 sq. ft. (California Type 3B, Tier 2, Cultivation License)(sometimes referred to herein as the "Indoor Cultivation"). The proposed 61,840 square foot addition to GH1 will contain Indoor Cannabis Nursery (California Type 4 License)(sometimes referred to herein as the "Indoor Nursery" or "Propagation").

Within the proposed 24,751 pack house/processing building, mature cannabis flower will be harvested, wet-bucked, and weighed. The flower product will then be handled in one of two ways. Approximately 40% (subject to change based on market conditions) of the daily flower production will be placed within vacuum bags and frozen in the processing building's proposed freezers. This "fresh-frozen" material would then be loaded into specially equipped freezer trucks and exported for further processing off-premises. The remaining 60% of the daily flower production would be dried, cured, bucked, and then packaged into consumer goods (such as jars or pre-rolls). The existing twelve (12) pre-fabricated containers currently existing on the Project Site and utilized for cannabis processing, will be removed.

The strongest occurrences of cannabis odor will be associated with Indoor Cultivation mature/adult-flower cultivation within GH1 and the proposed processing building. Nuisance odors from the nursery portion of GH1 are possible, although immature plants do not reach the state of maturity associated with cannabis' most pungent odors.

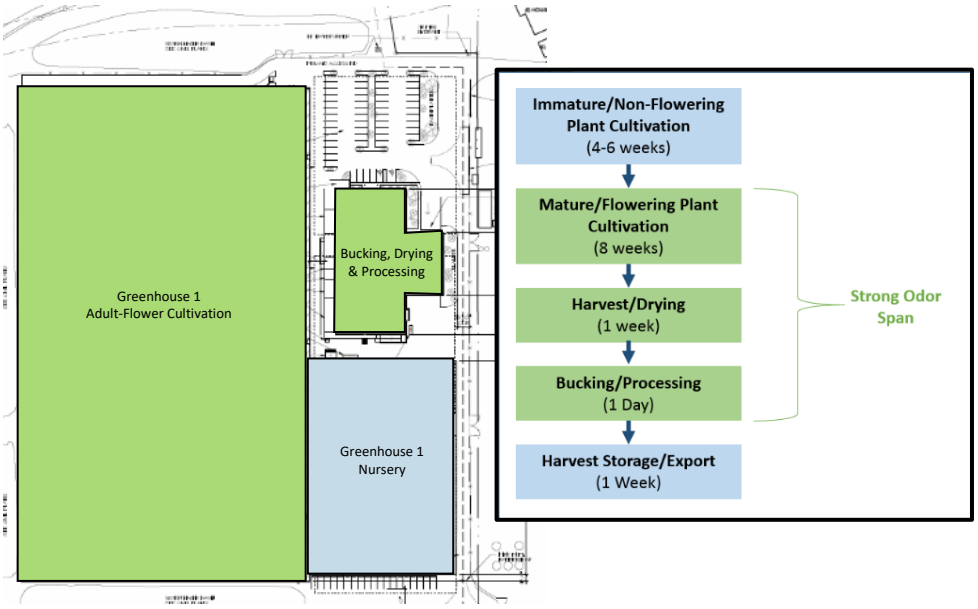
1.3 PHASES OF ODOR EMITTING ACTIVITIES

The phases of growing and processing cannabis proposed by Cresco/SLO Cultivation have two main stages that emit odors. These odor emitting phases are mature/flowering plant cultivation and bucking/processing. During an initial period of four (4) to six (6) weeks immature/non-flowering plant cultivation occurs during which minimal odors are expected. Once the juvenile plants become mature and begin to flower they enter the mature plant cultivation phase where they emit stronger odors; this phase spans approximately eight (8) weeks. Once the cannabis plants have matured plants are harvested and either:

1. Wet-bucked (bucking is the process of mechanically stripping cannabis flowers from the stem and leaf matter), weighed, and placed into bulk plastic bags which are vacuum sealed prior to freezing.
2. Placed in totes with sealed lids and transported to drying & curing rooms. After the plants are dried and cured, they are dry-bucked, and the flowers are packaged into consumer goods (such as jars or pre-rolls).

These cannabis containers will then be loaded into trucks for export. These phases of cannabis cultivation and processing are illustrated in Figure 3 below and each phase can be seen in the location that it occurs. It is important to note that due to the rotational crop management, the Site is expected to have approximately 30% of the total cannabis crop in a mature, strong odor emitting phase at any given time.

Figure 3- Cannabis Odor Distribution



1.4 ACTIVE ODOR CONTROL SYSTEMS- GREENHOUSES

1.4.1 Operation of Vented Greenhouses

Existing greenhouses throughout the Carpinteria region, including the Project's existing Greenhouse 1 and proposed nursery additional, are not air tight. Temperatures and humidity necessary for healthy plant cultivation are presently achieved by venting warm air moisture through mechanical vents on the roof. This passive method of ventilation allows greenhouses to leverage Carpinteria' s temperate climate conditions and operate with substantially reduced energy consumption in comparison with sealed greenhouses or indoor cultivation facilities which must utilize:

Figure 4- Existing Greenhouse 1 Exterior

- Additional gas combustion powered boiler to supplement greenhouse heat.
- Electrically driven compressors and/or fans to air condition.

- Electrically driven fans to drive air exchanges and reduce humidity build-up.
- Inject carbon dioxide to promote plant growth and overall health.

1.4.2 Scrubber Development for Vented Greenhouses

As a consequence of these passive ventilation operations, traditional carbon filtration of odors from vented air via negative pressure is not feasible. A partial vacuum cannot be practically achieved within the existing greenhouses to route air and avoid venting and constant recirculation of fresh air exchanges for such large volume quickly exhausts conventional carbon systems absorption capacity.

Accordingly, Cresco/SLO Cultivation proposes installing a recently developed odor control technology, or equivalent internal scrubber/filter system, known as a Regenerative Carbon Scrubber System (developed by Envinity Group).

This Regenerative Carbon Scrubber System consists of five (5) primary components.

1. An initial, cleanable, pre-filter to remove large particles from the influent stream of ambient air.
2. A high-flow ionization stage to apply a charge to the remaining particles after the pre-filter.
3. A second-stage, cleanable, filter to capture the remaining particles in the air stream.
4. A catalytic carbon filtration stage that utilizes the "traditional" carbon filter to retain any odor gasses long enough for Ultra-Violet (UV) light to oxidize and reduce the odor-causing gases to smaller, odorless gases.
5. A final stage with a specially-impregnated filter to capture any remaining fugitive gases that remain after the catalytic carbon stage.

The prototype system consists of a series of ground-mounted scrubber towers spread evenly throughout the interior of the greenhouse in a grid-like pattern (see Figure 5). Future production models will likely be offered in both ground-mounted and framing mounted variants (such that they can be elevated above benched growing space).

Due to the fact that the Regenerative Carbon Scrubbing Systems (RCSS) are an emerging technology for the purposes of treating greenhouse odors, per the request of CARP Growers, SCS recently completely a site specific analysis of the prototype system's efficacy at an active cannabis facility located at 3508 Via Real in Carpinteria (Project Site/Facility). SCS field staff confirmed that the Project Facility was similar to proposed cannabis greenhouses throughout the region with adult-flowering cannabis and operable roof vents. The RCSS is innovative technology intended to sustain a substantial reduction in detectable cannabis odors within greenhouses prior to the fresh air exchange which occurs when greenhouses are deliberately roof-vented, when air escapes during opening and closing of access doors, or fugitive air emissions which occur even when the greenhouse is predominantly sealed (roof vents closed and black-out curtains drawn). Traditional carbon scrubber systems have failed in this greenhouse function due to the significant volume of moisture laden air constantly

needed for recirculation. The carbon pore space becomes saturated in a matter of days or weeks, after which the efficacy of the odor reduction drops precipitously. In contrast, the combination of Envinity's electrostatic air purifiers combined with the regenerative carbon scrubber does not utilize the carbon bed as the primary means for odor molecule elimination. Instead the combination of titanium oxide impregnated carbon and ultra-violet light utilizes both adsorption and chemisorption to actively treat the odiferous chemicals within the filters. The systems pre-filters also prevent ultra-fine and larger diameter particulate matter from reaching and compromising the scrubbing media's pore space. The ionization process used to drive the chemisorption reaction takes place only inside the scrubber and no charged particles, radicals, or ozone are emitted by the system.

Figure 5- Prototype Regenerative Carbon Scrubber System

Carpinteria Case Study

To conduct the case study, SCS completed two (2) rounds of odor and air quality testing at the Project Facility. The overall test conditions included an approximate 2.6-acre greenhouse with cannabis cultivation in various stages of adult-flower throughout the structure. A total of fourteen (14) CFS-3000 scrubbers were deployed with each scrubber operating at an air circulation rate of approximately 2,950 cubic feet per minute (CFM). See Attachment 1 for the CFS-3000 product specification sheet.

Odor Testing Event 1 focused on the overall odor reduction within the circulated greenhouse air while *Odor Testing Event 2* focused on the net odor reduction in the influent and effluent streams of an individual scrubber. It is important to note that after the conclusion of the first testing event, the scrubber manufacturer (Envinity) was provided valuable feedback which was subsequently used to adjust the function of the scrubbers and further improve their odor reduction efficacy prior to the second testing event. The primary cannabis odor samples for both testing events were taken within the greenhouse structure interior.

Odor Testing Event 1: Pre-scrubber Adjustment, Circulated Greenhouse Air

In February 2021, SCS collected a suite of twelve (12) total odor samples at strategically appropriate times to capture potential maximum odors in the greenhouse's circulated interior air mass to determine odor destruction efficacy of the Regenerative Carbon Scrubber System. The testing event included the collection of six (6) odor samples prior to scrubber activation (i.e. unscrubbed air within the greenhouse) and six (6) odor samples after the scrubbers had operated for approximately forty-eight (48) hours. Each before and after sampling event included four (4) samples (two during AM hours and two during PM hours) taken inside various locations of the greenhouse intended to capture the average odor level in the continuously circulated greenhouse

environment. The other two (2) samples were taken outside the greenhouse to establish an exterior baseline. SCS strategically sampled at times and locations within the greenhouse which represent worst-case odor saturation, thus odor levels were often at orders of magnitude higher than average greenhouse conditions observed during earlier sampling events in Carpinteria.

These samples were then shipped to an independent third-party laboratory (Odor Science and Engineering, Incorporated in Bloomfield, Connecticut) for analysis. The OS&E laboratory has an expert odor panel which conducts blind evaluations of the odor samples (the panel is not informed of the potential type or source of the samples). The odor panel provides both a character (i.e. sour, skunk, exhaust, garbage) and an concentration for each odor sample. The concentration of odor is quantified as a dilution to threshold ratio (D/T) with higher numbers reflecting stronger odors. For example, the baseline odors present in most communities range from 8-12 D/T. Eight (8) D/T represents eight (8) parts of clean, purified air for each unit of odor sample. The specially trained and qualified odor panelists can often detect a net increase of 3-5 D/T over this baseline condition. Members of the general public can typically detect a net increase of 5-10 D/T. Most municipal jurisdictions with an adopted odor nuisance ordinance/policy therefore adopt a threshold of 10 D/T or higher.

Odor levels prior to scrubbing ranged from 7,599 D/T to 8,989 D/T with an average D/T of 8,296. Odor levels after the scrubbers operated for forty-eight (48) hours ranged from 1,067 to 2,606 with an average D/T of 1,537. This equates to an overall average of an 81.0% reduction in odor concentration in the continuously circulated greenhouse interior air. All interior samples were identified as having a character commonly including odor descriptors such as: cannabis, pot, weed, marijuana, and skunk. It is important to note that the averaged 81.0% odor reduction efficiency is the result of a relatively small data set which is hampered by one sample which registered at 65.7% reduction in odor. The remaining three (3) samples all registered odor reduction rates of 84% or higher with two (2) of the samples indicating that an approximate 87% reduction of odor is feasible. It is likely that increasing the density of scrubbers per acre and improving their even distribution throughout the greenhouse structure could improve the overall consistent performance of the system to achieve an odor reduction rate approaching or exceeding 87%.

Table 1- Odor Sampling Results from Circulated Interior Greenhouse Air

Sample ID	Odor D/T Prior to Scrubbing	Odor D/T After Scrubbing	% Reduction in Odor Concentration
AM Sample Point #1	8,989	1,166	87.03%
AM Sample Point #2	8,282	1,310	84.18%
PM Sample Point #1	8,313	1,067	87.16%
PM Sample Point #2	7,599	2,606	65.71%
		Average Total	**81.02%**

Odor Testing Event 2: Post-scrubber Adjustment, Scrubber Influent and Effluent
SCS collected a suite of five (5) total odor samples at strategically appropriate times to capture potential maximum odors in the ambient greenhouse environment to determine odor destruction efficacy of the individual Regenerative Carbon Scrubber System units. These five (5) sample collections included two (2) scrubber influent, two (2) scrubber effluent, and one (1) ambient location within a second, untreated, greenhouse. These samples were then shipped to an independent third-party laboratory (Odor Science and Engineering, Incorporated in Bloomfield, Connecticut) for analysis.

The odor samples relative to the influent of the Regenerative Carbon Scrubber System within the Project Site's greenhouse resulted in odor concentrations of 1,793 D/T (daytime) and 1,793 D/T (night-time) respectively with a character commonly including odor descriptors such as: cannabis, pot, weed, marijuana, and skunk. Samples taken of the effluent from Project Site's regenerative carbon scrubber system resulted in odor concentrations of 63 D/T (daytime) and 25 D/T (night-time). This data indicates an average of a 97.6% reduction of cannabis odor concentration from the influent of the scrubber compared to the effluent into the greenhouse. This 97.6% odor reduction limit should be considered the theoretical maximum odor reduction rate achievable in close proximity to each individual scrubber, however odor reduction for a greenhouse as an entire circulated air mass is unlikely to ever achieve this upper limit.

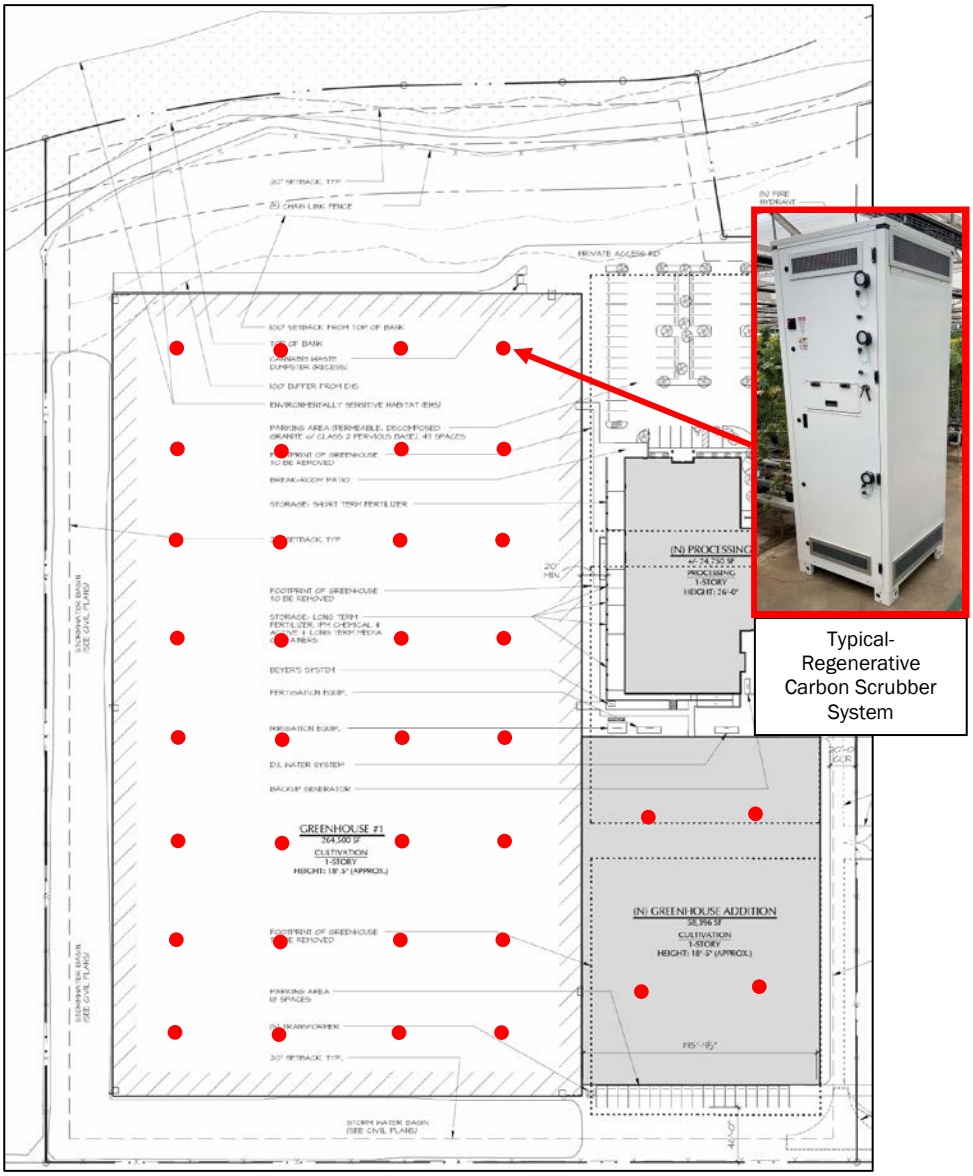
1.4.3 RCSS Use at the Cresco/SLO Cultivation Facility

Given the research and development state of ventilated greenhouses scrubbers, Cresco/SLO Cultivation commits to utilizing internal greenhouse odor scrubbers/filters such as the Regenerative Carbon Scrubbing System (RCSS) or equivalent internal greenhouse scrubbers/filters as the means of primary odor control technology as soon as commercially available and no later than twelve (12) months after the commencement of full-scale cultivation of cannabis at the facility. Consequently, upon installation and testing of the internal scrubber/filtration system, the facility operator shall also reduce or eliminate the use of vapor-phase neutralizing systems to the maximum extent feasible based upon the ability to prevent fugitive odors from reaching residentially zoned receptors. For the purposes of this requirement, the date of full-scale cultivation shall be interpreted as the receipt of Final Occupancy for the 322,896 square foot greenhouse AND issuance of the Business License necessary to allow the Project's maximum canopy cultivation.

The deployment of the RCSS odor control technology, or equivalent internal scrubbing system, would require the grid-like distribution of the scrubbers throughout the interior of the cultivation greenhouse. Assuming a similar size and density of scrubbers to the test case described above, the Cresco facility would be outfitted with approximately thirty-six (36) elevated scrubbing units similar to the conceptual layout provided in Figure 6 below. It is important to note that while helpful for the simplicity of this conceptual description, the ratio of scrubbers per acre will be highly variable based on facility specific design parameters including greenhouse volume, CFM rating for the scrubbers,

baseline odor concentration, etc. Therefore, the Project design will be based on final site specific engineering.

Figure 6- Conceptual Cresco RCSS



Estimating Odor Concentration Outside Vented-Greenhouses

As described in the sampling descriptions above, the verification sampling of the RCSS resulted in a measured average reduction in odor concentration of 81.0% in the circulated greenhouse air and 97.6% of the individual scrubber's direct exhaust/effluent stream. These estimated odor reduction levels were achieved inside the greenhouse. For the purposes of this pilot study, actual observed odor reductions outside the test greenhouse could not be measured accurately due to the fact that Envinity could only supply sufficient scrubbers to outfit half of the Project Facility. Therefore, remnant

fugitive odors from the other unscrubbed portion of the Project Facility would convolute the data. Additionally, the test facility was in close proximity to at least three (3) other active cannabis facilities within a 300-foot radius. All such surrounding facilities could have contributed fugitive cannabis odors and/or neutralizing vapor which would further degrade the quality of the data.

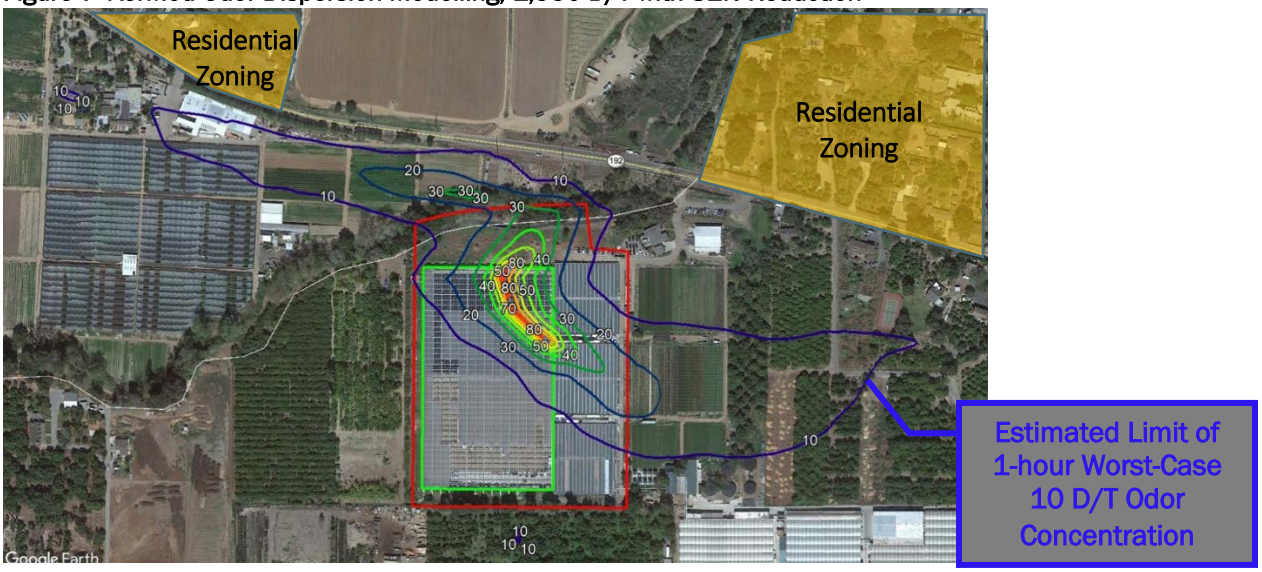
Therefore, for the conceptual design of the RCSS system for the Cresco Project Site, SCS utilized air dispersion modelling methods and scenarios, as described below, to estimate the combined odor reduction achieved through the use the interior scrubbers and the exterior dilution and dispersion of remaining odors which occurs once air is released from the greenhouse vents. Two (2) odor reduction rates were utilized for this exercise, the 81% average odor reduction proven to be achievable through the entire sampling set and an 87% odor reduction which is likely to be achievable through the incremental improvement of the scrubbers and/or the deployment of a higher density of scrubbers per acre. For modelling purposes, SCS assumed that the Cresco greenhouse would have an initial 1,950 D/T odor concentration; this estimate was derived by taking a series of five (5) baseline odor samples within Cresco's existing, non-conforming greenhouses (spread across multiple dates and times of day) and using the single highest odor concentration recorded. By using the single highest baseline odor, rather than an average, this should give the modelling a conservative, worst-case scenario approach. Most baseline odors samples taken from Cresco's greenhouse staying within a much lower range of 117 to 521 D/T.

SCS completed an analysis of the Cresco property utilizing sophisticated air dispersion model known as AERMOD Version 21112, which is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. AERMOD has the capability of utilizing site specific meteorological and topographic data, thus making the model more accurate and capable of producing site specific isopleth maps to illustrate the dispersion of odor in proximity to the project site. This offers a reasonable prediction of the dispersion of the remaining odor from the Cresco facility after RCSS scrubbing has occurred.

As shown in Figure 7 below, assuming Cresco has a starting odor concentration of 1,950 D/T and the scrubbers achieve an interior odor reduction of 81%, the remaining maximum odor expected to be released from the greenhouse vents is approximately 369 D/T. After that initial release, the air dispersion model predicts the fugitive odor distribution and dilution and creates isopleth contours which visually illustrate the location and diminishing concentration of the fugitive odor as it travels away from the greenhouse. It is extremely important to note that these isopleth contours predict a 1-hour worst-case scenario based upon five years of meteorological conditions. Therefore, the estimated odor contours do not constitute a persistent odor distribution that would be experienced by a single receptor on a daily basis. Odors of up to 10 D/T in concentration (generally considered the lower limit of a nuisance odor) spread off of the Project parcel along a generally east-west axis but stay predominantly south of Foothill Road and the residentially zoned receptors to the north. Remnant odors drifting

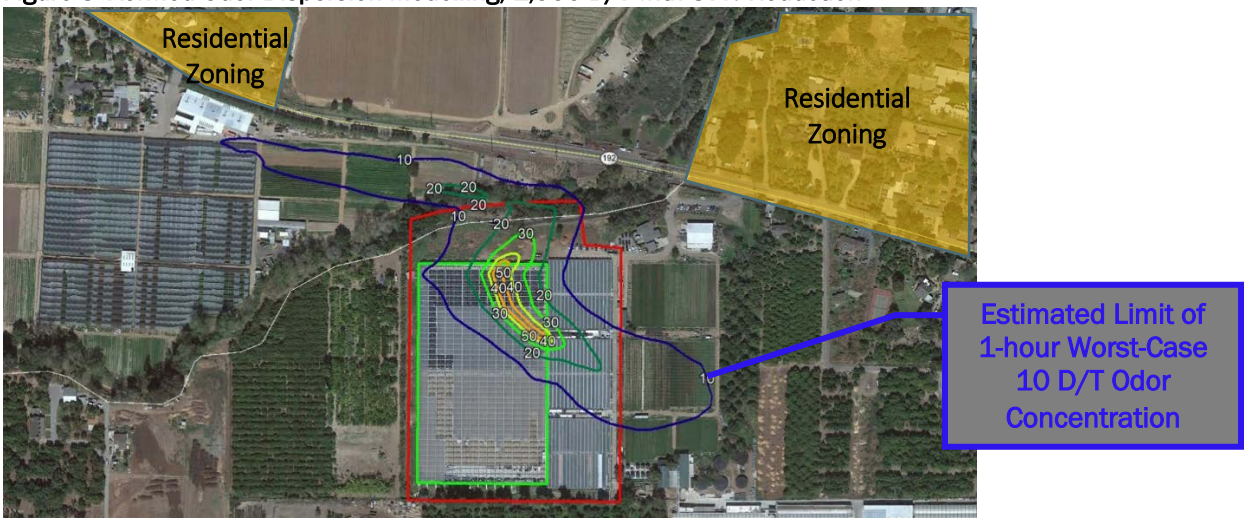
to the east or west have the estimated potential to be experienced by agricultural properties approximately 900-feet beyond the Project Site boundary during worst-case 1-hour conditions but contours do not directly intersect with any residential structures.

Figure 7- AerMod Odor Dispersion Modelling; 1,950 D/T with 81% Reduction



As shown in Figure 8 below, assuming Cresco has a starting odor concentration of 1,950 D/T and the scrubbers achieve an improved interior odor reduction of 87%, the remaining maximum odor expected to be released from the greenhouse vents is approximately 253 D/T. Odors of up to 10 D/T in concentration (generally considered the lower limit of a nuisance odor) are still predicted to spread off of the Project parcel along a generally east-west axis and stay south of Foothill Road and the residentially zoned receptors to the north. Remnant odors spreading to the east now take a more southerly direction and diminish faster; thus 10 D/T odors predominantly remain within Ocean Breeze's cultivated lands approximately 600-feet southwest of the agriculturally zoned receptors along the southern side of Foothill Road.

Figure 8- AerMod Odor Dispersion Modelling; 1,950 D/T with 87% Reduction



1.4.4 RCSS Findings and Recommendations

Due to the emerging nature of this RCSS technology, and limited efficacy testing conducted to-date, SCS has made a series of recommendations needed to further refine data pertaining to the performance and deployment of the Regenerative Carbon Scrubbing Systems to CARP Growers and the manufacturer, Envinity.

However, the combination of air sampling and modelling conducted to-date indicate that the system is a potentially viable means of odor control for the Cresco facility, especially if:

1. The next iteration of the RCSS technology can improve its odor reduction efficacy to 87% or greater, or
2. The RCSS technology is supplemented by secondary odor mitigation such as but not limited to vapor-phase neutralizers.

If the Cresco facility is selected for early adoption of RCSS, or equivalent internal scrubber systems, to assist in the progression of cannabis odor control technology, SCS offers the following facility specific recommendations:

1. Deploy an initial set of RCSS, or equivalent, units to achieve a similar air exchange rate as was achieved in Envinity's/RCSS' prior testing regime. This should result in an odor concentration reduction of 81% or better. Given the intent to reduce or eliminate the use of vapor-phase neutralization systems, retain the Project Site's existing perimeter vapor-system and single Byer's blower unit.
2. Upon initial RCSS installation and functionality testing, commence RCSS operation and temporarily cease operation of the vapor-phase system. Conduct initial operational testing and observations.
    a. If the RCSS standalone system is sufficient to prevent offsite odor observations, continue to operate the system for a period of six (6) months to ensure the odor reduction efficacy can be maintained consistently without failure of the system filters, carbon saturation, etc. Should the system continue to perform at expected levels, proceed to permanent decommissioning of the vapor-phase system.
    b. If offsite odor observations occur, reactivate the vapor-phase system temporarily while RCSS improvements are completed. Improvements can include but are not limited to: manufacturer recommendations to improve individual scrubber performance, adjustment of scrubber location within the greenhouse, or installation of additional scrubber units.
3. If needed, implement improvements to the RCSS and resume standalone testing with vapor-phase system deactivated.
    a. If the RCSS standalone system is sufficient to prevent offsite odor observations, continue to operate the system for a period of six (6) months to ensure the odor reduction efficacy can be maintained consistently without failure of the system filters, carbon saturation, etc. Should the

system continue to perform at expected levels, proceed to permanent decommissioning of the vapor-phase system.

b. If offsite odor observations occur and no further RCSS performance improvements are viable.

   i. Begin testing the use of RCSS and vapor-phase in combination with an emphasis on the RCSS as the primary odor mitigation system and minimization of vapor-phase neutralizer. Effort should be made to utilize the minimum daily-volume release of neutralizer needed to achieve effective odor control including limited vapor-phase system operation to certain times of the day or operational activities where supplement odor mitigation is warranted.

   ii. Or, conduct a new odor control BACT analysis to examine alternative odor mitigation technologies.

1.4.5 Vapor-Phase Neutralizer

As described above, Cresco/SLO Cultivation intends to utilize emerging RCSS or equivalent internal greenhouse scrubbing systems as the primary means of odor control for greenhouse cultivation. However, if needed to provide odor control until such time as the RCSS is commercially available, or as a supplement to the greenhouse scrubbing systems, the leading vapor-phase odor neutralizing technology developed and operated by Byers Scientific & Manufacturing would be available. Refer to Attachment 4 for more information regarding the Byers Odor System.

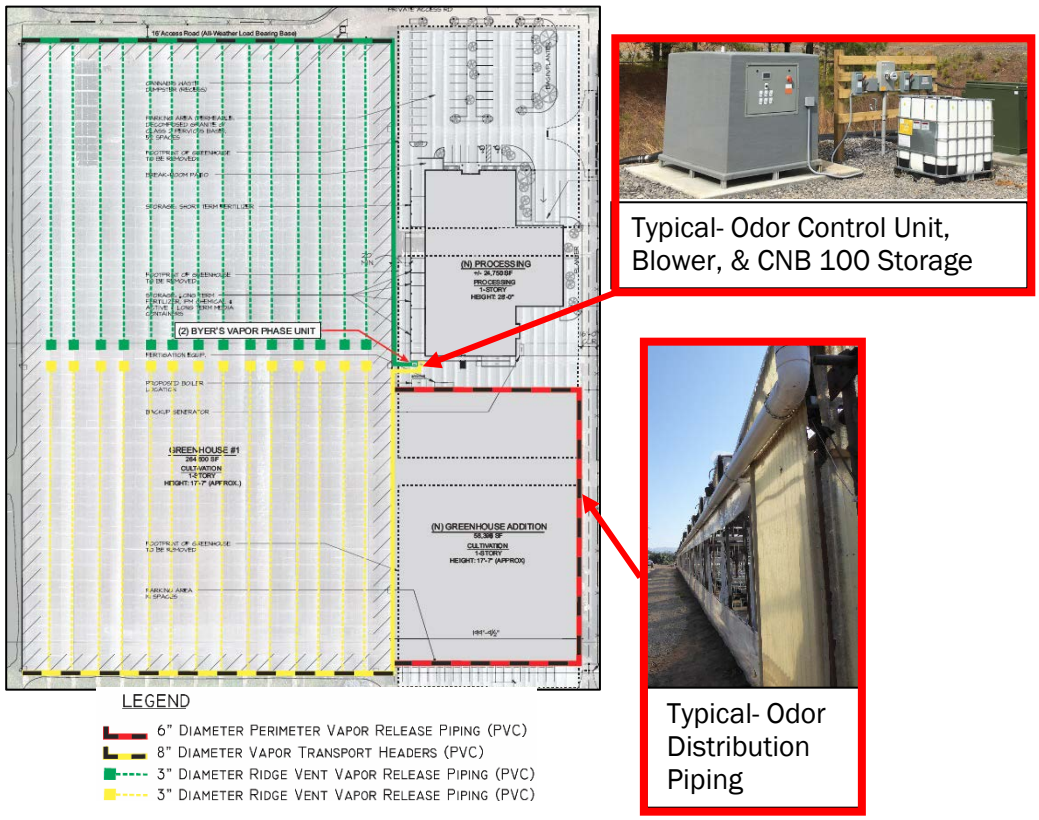
Byers Odor System consists of four (4) primary components.

6. A holding tank containing an odor neutralizing agent developed specifically to neutralize odors from cannabis. This odor neutralizing agent is known as Ecosorb CNB 100 (CNB 100) or CNB 107 and is manufactured by OMI Industries, a leader in odor neutralization materials. Refer to Attachment 5 for more details regarding CNB 100 and 107.
7. A high-flow, low pressure blower which takes the odor neutralizing agent and distributes it as a vapor into the perimeter pipeline system.
8. A PVC pipeline system erected around the perimeter of the nursery portion of GH1 (lower odor area) and along roof vent openings of the adult/mature flower cultivation portion of GH1 (higher odor area) which releases the odor neutralizing agent vapor. The Byers Odor System entrains vaporized odor neutralizers into moving air outside the cannabis cultivation facilities. Odorous molecules are then neutralized as they travel downwind with neutralizer traveling and mixing with this odorous air mass regardless of changing wind speeds, wind direction, or other weather factors.
9. A real-time computer monitoring system which allows the operator to remotely regulate the flow of the odor control system to ensure that the amount of odor neutralizing agent is adjusted to match current odor producing conditions,

seasonal weather patterns, and other fluctuating conditions. The system is also 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.

Refer to Figure 9 below for a graphical representation depicting how the Byers Odor System will be deployed for the Cresco/SLO Cultivation Carpinteria Project Site. Refer to Attachment 2 for a more detailed odor system design.

Figure 9- Byers Odor Control System Layout



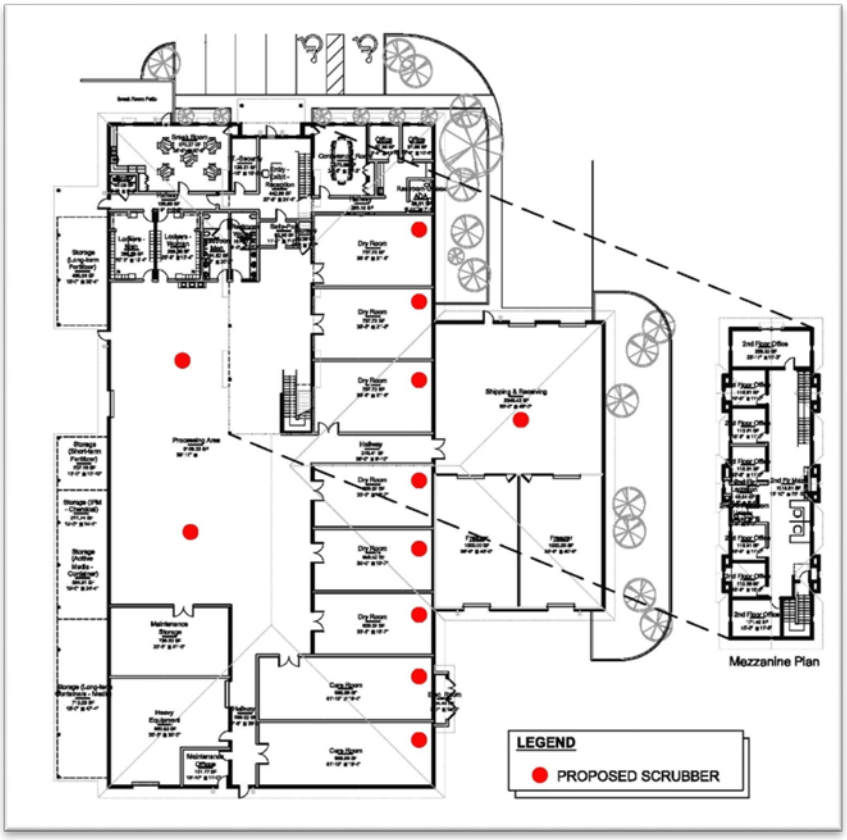
An employee will walk the perimeter of each greenhouse daily to inspect the structural integrity of the Byers system. The employee will also observe odors to ensure that no nuisance odors are breaching the property line.

1.4.6 Processing Building Carbon Scrubbers

The proposed 24,751 square foot pack house/processing building, where all cannabis processing and storage will occur, will be a purpose built metal building with vapor barriers and opening seals that will limit air (and odor) exfiltration at the exterior building envelope. The air handling system will maintain interior air quality for employees, maintain a slight negative pressure differential between the inside and outside air, and control odor exfiltration. HVAC exhaust ducts to the outside will be controlled with industrial grade carbon odor absorbers. The system will be designed by a professional mechanical engineer and maintained throughout the life of the Project. In particular, on-site personnel will be required to regularly check the carbon media for saturation

and degradation of the system's ability to mitigate odor, at that time the carbon media shall be replaced. As illustrated in Figure 10, carbon scrubbers will be distributed throughout each room which contains odiferous cannabis activities with the exception of the freezer rooms where all cannabis is vacuum sealed in thick plastic bags.

Figure 10 - Scrubber System Layout



Within this structure, 15,260 square feet will be utilized for odorous cannabis activities while the remaining 9,491 square feet will be used for non-odorous activities including freezers, maintenance storage, heavy equipment, offices, IT/Security, lockers, bathrooms, and breakroom. With an average ceiling height of 12'0" feet, the cannabis processing portion of the structure will be approximately 183,120 cubic feet. A minimum of eleven (11) Camfil 3,000 cubic feet per minute (cfm) scrubbers will be installed, with a combined capability of treating up to 33,000 cfm. If ran at maximum capacity the filters would be capable of completing a maximum of ten (10) air exchanges per hour which is sufficient to achieve proper odor control. Based on site specific testing it will be beneficial to slow the rate of air exchanges to two (2) to four (4) per hour to increase contact adsorption time with the carbon and/or extend the carbon filters' lifespan. Such adjustments should be made with initial testing after facility operation commences.

Figure 11- Typical Elements of a Carbon Filtration System

Compact Carbon Scrubber

Carbon Scrubber w/Blower & Pre-filter

In the unlikely event the facility experiences offsite odor observations, the design engineer shall be contacted to conduct follow-up investigations to ensure the active odor control systems are functioning properly, maintained in good working order, and elements of odor control such as frequency of carbon medium replacement or daily volumes of vapor neutralizer have been adjusted accordingly to operating conditions. If offsite odors persist, a combination of odor grab samples, terpene measurements, or comparable scientific technique shall be used to:

1. Ascertain if the source of odor is coming from the subject facility.
2. Verify which project activity/structure is the source of fugitive odors (i.e. greenhouse cultivation, processing, product loading).
3. Take corrective action to improve odor control methods through modified operational Best Management Practices and/or install improved mechanical systems.

Refer to Section 1.6.4 of the Plan for greater detail regarding odor observation response protocols.

1.5 ODOR CONTROL BEST MANAGEMENT PRACTICES

Once operational, the project staff will implement odor control Best Management Practices (BMPs) as outlined below:

Best Management Practice 1: Designate an onsite *Odor Management Specialist* at the facility. This employee will be given time, resources, training, and incentives to control odors as a first priority.

Best Management Practice 2: The onsite *Odor Management Specialist* should at a minimum walk the Site two (2) times per day to:

A. Ensure that all means of active odor control (neutralizing vapor and carbon filtration) are operational and in good working order.

B. Observe onsite personnel to ensure that odor control BMPs are implemented. BMPs include keeping doors closed whenever feasible, placing waste in sealed containers, limiting processing-related activities to the odor controlled building(s). If BMPs are not consistently implemented, the *Odor Management Specialist* shall report inconsistencies to appropriate management for corrective action. Maintenance of a daily odor inspection log and check-list shall be made a part of these BMPs.

C. *The Odor Management Specialist* shall be a point of contact to receive odor complaints from the regulatory agencies or the community. The specialist shall request as much detail as possible regarding the complaint, including:

   i. Location (be exact, narrow it down within 100-feet or less if possible).

   ii. Time (be exact, to the minute if possible).

   iii. Weather conditions (approximate temperature, wind speed, etc.).

   iv. Visual observations. Did the complainant see the cannabis facility/operations from which the odor may have come, or see any unusual activities in the observed area?

Best Management Practice 3: Build a company culture wherein all personnel understand the importance of odor control. Train each person in their individual odor control responsibilities at the facility. Training elements include:

A. Ensure all employees are aware of the *Facility Odor Control Plan* for the entire Site and the odor control BMPs that apply to their tasks within the workforce.

B. Incorporate the fundamentals of odor control in the training programs; provide this instruction in bi-lingual form as needed.

C. Consider incentives with offsetting disciplinary measures based on odor control implementation and success.

Best Management Practice 4: Secondary miscellaneous odor management BMPs should be implemented consistently as follows:

A. Facility doors should be kept closed whenever feasible. The opening of doors should occur only momentarily for entry and exit, especially in areas of cannabis processing. The installation of self-closing doors, heavy-duty plastic curtains, or other safe means of limiting fugitive odors should be considered.

B. Keep all processing activities within the perimeter of its odor control system. Have contingency methods in place so that variations in weather conditions (especially hot weather) do not necessitate the relocation of processing outside.

C. Acquire dumpsters with sealed lids for handling of cannabis waste. Keep lids closed whenever feasible.

D. Consider using plastic bags to line plastic totes to contain/seal cannabis between processing areas as well as during offsite transport. The build-up of cannabis particulate and oil on inside surfaces of totes is a source of fugitive odors.

E. Consider providing employees, particularly those that work in cannabis processing zones, with uniform garments and/or professional laundry services with encouragement or requirements to change clothes prior to leaving the facility.

F. Provide properly sealed vehicles for transportation of cannabis outside of facilities, both smaller golf cart type vehicles inside the project perimeter and larger export trucks used to transport products offsite for sale.

Best Management Practice 5: Active odor control should start with an examination of the pertinent structural envelope. With rare exceptions, such as open field neutralization, most active odor control mechanisms utilize a structure of some kind to initially contain and channel odors to a specific location for treatment. Indoor or mixed-light cultivation utilize buildings or greenhouses to contain cannabis odors and channel them to either a HVAC system or roof/wall vents. Processing activities should occur within wood-framed, metal fabricated, or concrete tilt-up structures. Evaluating, controlling, and/or minimizing the odor releases from these structural envelopes is paramount to the effectiveness of any active odor control system. Typical examples include: keeping large rolling greenhouse doors closed whenever feasible, replacing/repairing any significant glass/polycarbonate sheeting on greenhouse exteriors, placing neutralization release points close to all roof vents or side wall fans on greenhouses, sealing leak points on processing buildings with spray in insulation or equivalent, and keeping all man or vehicle doors on processing buildings closed whenever feasible. Being mindful of maintaining a proper envelope control of cannabis odors will significantly improve the efficacy and often reduce the operating costs of active odor control mechanisms.

Best Management Practice 6: For all active odor control systems, proper design, operation, and maintenance of these systems is critical to their effectiveness. Therefore, in relation to the vapor neutralizing and carbon filtration systems, the following parameters should be addressed:

A. The piping or equivalent means of vapor distribution should be installed such that it maximizes mixing of the neutralizer with cannabis odors released at all roof vents, active exhaust fans, and operable doors which are frequently opened. The piping must be tested for consistent pressure release over the whole length of the system and inspected regularly to ensure pipe joints have not decoupled.

B. The total linear length of piping, fan/mechanical sizing for the vapor generation/blower unit, and volume of neutralizer released per day should all be evaluated in comparison to the overall size of the site and its proximity to receptors.

C. Be aware that periods of downtime in vapor-phase system operation leaves portions of the facility with little to no odor mitigation of cannabis odors. Develop a maintenance plan and checklist to schedule and document maintenance activities, record replaced parts, and determine frequency of failures of the

vapor phase system with a goal of minimizing system downtime to the maximum extent feasible. If possible, plan maintenance related outages to occur in the afternoon, during steady wind conditions, such that natural dispersion and dilution help mitigate the odors which are no longer being neutralized.

D. Do not use carbon filtration systems unless they are designed by a qualified engineer/specialist and properly maintained. Using a poorly designed or maintained system is potentially worse than no system at all. Especially if the output of the system vents to atmosphere.

E. Ensure that the processing structure has a relatively sealed envelope and institute administrative protocols/training to ensure man and vehicle doors remain closed whenever feasible to preserve the negative pressure of the system.

F. Consider the use of structural upgrades such as mud-room style double-entry doors and the creation of substructures to contain drying or other high-intensity odors in a smaller volume of air space which needs treatment.

G. Due to the size and intensity of odors in some processing buildings, typical off-the-shelf carbon canisters may experience odor breakthrough in a far shorter time than expected. Make sure the project engineer is aware of this and accommodates accordingly in the design and/or operation.

1.6 ADAPTIVE MANAGEMENT STRATEGIES

1.6.1 Weather Monitoring

1. Operator shall install and maintain continuous weather monitoring equipment in accordance with direction of a meteorological monitoring network plan provided by a qualified third-party professional so as to continuously record and transmit weather data, including wind speed, direction (including low speed wind direction capabilities), temperature and barometric pressure for as long as it engages in cannabis cultivation at this Property.

2. This weather data will be maintained electronically and made available upon request (for at least one year) to the Department.

3. Operator will use weather data to identify the variables and conditions that can cause, contribute to and affect Odor Episodes (defined below) and to better understand the transport and fate of odor emissions from cannabis operations in Carpinteria.

4. In the event that a regional meteorological network is created by the Department or other entity, data from Operator's weather monitoring equipment shall be made available in real time to such network.

1.6.2 Odor Technology

The facility shall follow all methods for controlling and reducing odor as outlined in the Odor Abatement Plan and shall deploy, or re-deploy the best available control technologies (BACT) or methods as necessary to control odor at the facility, as determined by the Department. Any BACT to be employed by an Operator at a future date may require additional permits or changes to existing permits as determined by the Department.

1.6.3 Initial Audit & Continuing Monitoring

The Operator shall develop a testing program to deploy continuously over a 7-day period the best available proven odor monitoring device/method to measure cannabis odor causing emissions from the property during the first week of permitted operations, if other equivalent baseline odor testing has not already been conducted. The applicant shall maintain all odor monitoring data for 3 years and shall provide odor monitoring data to the Department upon request.

1.6.4 Community Participation and Outreach

Prior to the commencement of operations, the Operator shall provide to property owners and residents located within 1,000 feet of the Property the contact information for the Primary Odor Contact, who shall be available by telephone on a 24 hour/day basis to receive calls regarding any odor complaints (Santa Barbara County Article II Coastal Zoning Ordinance (CZO) §35-144U.C.6.f.1.). The Operator shall immediately notify the Department, property owners and residents located within 1,000 feet, and the COL of any changes to the local contact (CZO §35-144U.C.6.f.2.).

1.6.5 Odor Response Protocol

The Operator will continuously monitor odor complaints and will immediately route complaints to the Primary Odor Contact for a timely response. The Operator may utilize analytical tools and measurement systems to evaluate odor inquiries and assess odor conditions, as well as for routine monitoring of horticultural conditions, for the long-term goal of eliminating fugitive cannabis odors.

The Operator shall notify the Department of any complaints the Operator receives within 24 hours of receiving the complaint (CZO §35-144U.C.6.f.3). The Operator shall respond to an initial complaint within one hour and if needed, take corrective action to address any violation of CZO §35-144U.C.6 within two hours (CZO §35-144U.C.6.f.4). The Operator shall implement a complaint tracking system for all complaints that the operator receives, which includes a method for recording the following information: contact information of the complainant (if the complainant is willing to provide), as well as a description of the location from which the complainant detected the odors; time that the operator received the complaint; description of the complaint; description of the activities occurring on site when the complainant detected the odors; and actions the operator implemented in order to address the odor complaint. The operator shall provide the

complaint tracking system records to the Department as part of any Departmental inspections of the cannabis activity, and upon the Department's request. The operator shall maintain the complaint tracking records for a minimum of five years (CZO §35-144U.C.6.f.5).

If the Department receives three verified complaints regarding odor events in any 365-day period, the Operator shall implement corrective actions to comply with the odor abatement requirements of County Code Section §35-144U.C.

Level 1 Response - Initial Assessment and Corrective Actions

For any instance in the Odor Response Protocol below where the Operator can determine that an odor complaint is "resolved" or "unresolved", the determination by the Operator does not preclude the Department from taking further actions, including enforcement actions pursuant to Section 35-185 (Enforcement and Penalties), of the Coastal Zoning Ordinance, which may include, but are not limited to, initiating proceedings to revoke the applicable cannabis land use entitlement(s) pursuant to Section 35-169.8 (Coastal Development Permits) of the Coastal Zoning Ordinance. .

Once an odor complaint is received by the Operator, the Operator shall, within one hour after the odor complaint is received, perform an onsite visual inspection to ensure the function and integrity of the following:

1. The odor abatement equipment is working as intended and that there are no visible breaks or blockages in any odor abatement equipment; and
2. If being used, all carbon scrubbers or other odor abatement equipment are working properly and filters are clear of any debris; and
3. All doors are closed, sealed and secured, including greenhouse entry and exit points, internal processing rooms and processing entry and exit points, pursuant to Operator's Standard Operating Procedures ("SOPs"); and
4. A walk of the perimeter of the cannabis facilities, inspecting the integrity of the walls and structure and examining if a physically apparent source of odor can be detected.

If a cause for the reported odor episode was discovered during the inspection, the Operator shall take corrective action to address any violation of CZO §35-144U.C.6 within two hours of the complaint.

After taking corrective action, the Operator shall complete a site inspection at the reported odor complaint location to determine whether the odor complaint has been abated. If odor is no longer detectable at the reporting location identified in the complaint or at locations in the direction where the Operator would expect odor to migrate based on the meteorological conditions present at the time of the odor complaint, then the odor complaint may be deemed resolved.

If no cause for the reported odor complaint was ascertained during the inspection and if the known reporting location is confirmed to be odor-free, the odor complaint is resolved.

Level 2 Response -- Diagnostic Assessment and Corrective Actions
If, after the Level 1 Response is complete, the Operator continues to observe fugitive odors, receives further odor complaints indicating that the odor is persisting or recurring periodically during the following 8-24 hour period, the Operator shall:

1. Conduct a weather assessment (wind speed, direction and any shifts, anecdotal weather information collected from interested parties, time and duration of odor complaint) of the conditions that were occurring at and in the two hours before the time of the odor complaint;
2. Perform a comprehensive diagnostic review of the odor abatement system;
3. Interview staff members that were on site during and in the two hours before the time of the odor complaint and determine if they performed or observed any actions or circumstances that may have caused or contributed to the reported odor complaint and evaluate if the operation adhered to the Operator's SOPs for odor abatement;
4. Repair or correct any conditions discovered that may cause or contribute to the odor complaint.

If a cause for the reported odor complaint is identified, the Operator shall take corrective actions, revise its SOPs, and/or adjust the odor control systems as necessary to address the condition(s) that resulted in the odor complaint. The Operator shall obtain any applicable permits related to project changes resulting from corrective actions before implementing any new odor abatement equipment that is not identified in the OAP. The Operator shall report the conclusions of its investigations (excluding any bona-fide proprietary or trade secret information) to the Department. Once these steps are completed, and the odor is not detectable at the reporting location, the odor complaint shall be deemed resolved.

If no cause for the reported odor complaint was ascertained during diagnostic assessment, and if the known reporting location is confirmed to be odor-free, the Operator shall prepare a written report (excluding any bona-fide proprietary or trade secret information) summarizing the Level 2 Response and submit it to the Department.

Level 3 Response -- Analytical Assessment and Corrective Actions
If, after the Level 2 Response is complete, the Operator continues to observe fugitive odors and/or receives further odor complaints during the following 8-24 hour period, or the reporting party responds that odor is persisting or recurring periodically during the following 8-24 hour period, the Operator shall implement further corrective actions as follows:

1. Commission a Professional Engineer (PE) or a Certified Industrial Hygienist (CIH) to perform an on-site evaluation of odor levels to analyze whether the Operator is

the source of the reported odor complaint. The Operator will use its meteorological data and knowledge of operational activities at the time specified in the odor complaint as feasible.

2. If no further conclusions are found from the analysis, and the Operator is unable to identify the potential cause of the odor complaint, the odor complaint is unresolved.
3. In the event that an odor complaint is unresolved and is recurring or continuing, as evidenced by repeated odor complaints from the property, the Operator shall:
    i. Commission a Professional Engineer or a Certified Industrial Hygienist to implement a testing protocol to measure odor or an odor-causing constituent using the best, currently available objective, odor measurement device, technology or methods.
    ii. Undertake corrective actions identified by the PE or a CIH including but not limited to:
        1. Revise its SOPs.
        2. Adjust or improve the function of the existing odor control systems (i.e. adjust dispersal of neutralizers, replace spent carbon media, install self-closing doors).
        3. Install supplemental or replacement odor control technologies, such as but not limited to internal greenhouse scrubbing systems. Such technology could potentially include installation of 5-15 Regenerative Carbon Scrubbing units per acre of adult-flowering cultivation (exact system design to be defined on a Project specific basis as determined by a qualified professional).

If a cause for the reported odor complaint is identified, the Operator shall take corrective actions as recommended by the PE or CIH as necessary to address the condition(s) that resulted in the odor complaint. The Operator shall obtain any applicable permits related to project changes resulting from corrective actions before implementing any new odor abatement equipment that is not identified in the OAP. The Operator shall report the conclusions of its investigations (excluding any bona-fide proprietary or trade secret information) to the Department. Once these steps are completed, and the odor is not detectable at the reporting location, the odor complaint shall be deemed resolved.

If no cause for the reported odor complaint was ascertained during diagnostic assessment, and if the known reporting location is confirmed to be odor-free, the Operator shall prepare a written report (excluding any bona-fide proprietary or trade secret information) summarizing the Level 3 Response and submit it to the Department.

If after the PE or CIH Analysis has been completed, the Operator believes it is not the sole or a contributing source of the reported odor complaint, the Operator shall notify the Department of its conclusion, within three (3) calendar days of reaching such conclusion. The Department will consider this information in determining whether corrective actions are necessary to comply with the odor abatement requirements of Section 35-144U.C,

but the Department is not bound by the Operator's conclusion. If the Department verifies that the Operator is not a contributing source of the reported odor complaint, the complaint shall be deemed resolved.

Level 4 Response -- Comprehensive BACT Analysis and Corrective Actions

If, after the Level 3 Response is complete, the Operator continues to observe fugitive odors and/or receives further odor complaints, or the reporting party responds that odor is persisting or recurring periodically during the following 8-24 hour period, the Operator shall implement further corrective actions as follows:

a. Commission a comprehensive Best Available Control Technology (BACT) analysis and submit to the Department a written report prepared by a Professional Engineer or a Certified Industrial Hygienist that includes:

    1. The likely or potential source of the odor complaint;
    2. Additional adaptive management techniques, including operational modifications and curtailment that are recommended to eliminate odor complaints;
    3. Recommendations for new or revised odor abatement technologies; and
    4. Installation of current best available analytical tools to monitor, identify and quantify the emissions causing or contributing to odor complaints.

If the BACT analysis concludes that a more effective odor control system is available that will resolve or materially reduce the severity the Odor Episodes, the Operator shall take all necessary steps to install the more effective odor control system as expeditiously as practicable. The Operator shall obtain any applicable permits related to project changes resulting from corrective actions before implementing any new odor abatement equipment that is not identified in the OAP. The Operator shall report the conclusions of its investigations (excluding any bona-fide proprietary or trade secret information) to the Department. Once these steps are completed, and the odor is not detectable at the reporting location, the odor complaint shall be deemed resolved.

If no cause for the reported odor complaint was ascertained during diagnostic PE or CIH assessment, and if the known reporting location is confirmed to be odor-free, the Operator shall prepare a written report (excluding any bona-fide proprietary or trade secret information) summarizing the Level 4 Response and submit it to the Department.

If after the BACT Analysis, the Operator believes it is not the sole or a contributing source of the reported odor complaint, the Operator shall notify the Department of its conclusion, within three (3) calendar days of reaching such conclusion. The Department will consider this information in determining whether corrective actions are necessary to comply with the odor abatement requirements of Section 35-144U.C, but the Department is not bound by the Operator's conclusion. If the Department verifies that

the Operator is not a contributing source of the reported odor complaint, the complaint shall be deemed resolved.

For all Odor Episodes – Reporting and Corrective Actions:
The Operator shall make available to the Department and any reporting party, upon request, a report detailing all efforts taken to resolve odor complaints.

1.6.6 Emerging Odor Control Technologies

As with any environmental mitigation technology, it is anticipated that odor control systems for cannabis facilities will continue to evolve and improve over time. As of the date of certification of this Plan, vapor-phase neutralizer systems and negative pressure carbon scrubbers are the best proven odor control technologies appropriate for the greenhouse and processing building components of this Project respectively.

Current research and development in the field is focusing on the potential use of regenerative carbon scrubbers within greenhouses which are capable of treating significant volumes of odorous air without quickly degrading the carbon's odor adsorption efficacy. If further development of greenhouse scrubbing technology results in a system which exceeds the odor abatement efficacy and consistency of vapor neutralizing systems, Cresco/SLO Cultivation will commence site specific testing and design to either supplement or replace its vapor-phase neutralizer system with greenhouse scrubbers as needed to further abate any offsite Odor Observations from occurring in residential zones as a result of the facility's operations. Similar facility improvement actions will be taken in the future should Cresco/SLO Cultivation be responsible for Odor Observations at regulated offsite receptor points and the adoption of newer odor abatement technologies is reasonably believed to further abate the offsite transportation of odors.

1.7 ODOR SYSTEM CERTIFICATION

Cresco/SLO Cultivation is committed to operating its Project in a manner to avoid causing odor impacts to surrounding residences located in residential zones. Cresco/SLO Cultivation will apply its best efforts to contain and resolve any odor issues, as outlined in this OAP, and will sustain those efforts any time odor is reported offsite at surrounding residences and publicly accessible locations. Using Adaptive Management techniques as Corrective Actions to effectively address and resolve odors is expected to provide an iterative and successful strategy for SLO Cultivation to be a good neighbor and responsible member of the community.

SCS has conducted pilot testing of RCSS greenhouse scrubbing technology and completed site specific air dispersion modelling to confirm the likely effectiveness of internal greenhouse scrubbing systems. The Byers Odor Management System, and similar vapor-phase odor neutralization technology, has a proven record of substantially reducing nuisance odors including odors specifically related to cannabis.

For example, the Santa Barbara County Air Pollution Control District (SBC APCD) in a presentation dated May 15, 2018 indicated that there were approximately fourteen (14) cannabis operations utilizing vapor-phase odor neutralizing systems throughout the Carpinteria region. APCD staff observed one such system in operation in February of 2018 at the 650,000 ft^2 of cannabis cultivation operated by Ever-Bloom. APCD staff noted the odor control system was operating and working as advertised and noted that pungent odors from inside the greenhouse, "could not be detected directly outside the greenhouse or at the property line." Refer to Attachment 6 for further details regarding this APCD review.

Additionally, the Long Range Planning Division of Santa Barbara County recently prepared a Final Environmental Impact Report (FEIR) to amend its Land Use and Development Code to allow certain types of cannabis activities. Appendix F of the FEIR provides a research summary on odor control technology, specifically the vapor-phase system developed by Byers. The FEIR cites several locations where this technology is effectively in use by cannabis operations, including Carpinteria, CA and Pueblo, CO. Additionally, this same technology has been in use at the Miramar Landfill in San Diego, CA. Refer to FEIR State Clearinghouse Number 2017071016 for further information.

Furthermore, SCS conducted independent research regarding the efficacy of the Byers Odor Control System:

1. Contacted Byers Scientific and reviewed a list of existing facilities where the Byers Odor Control System is currently deployed and operational, including cannabis facilities located with similar climate zones, weather patterns, size of cultivation operations, and proximity to sensitive receptors as compared to the proposed SLO Cultivation Project.

2. Contacted one such facility operator to confirm the qualitative efficacy of the Byers Odor Control System in operation.

3. Contacted SBC APCD staff to verify their observations of the efficacy of vapor-phase systems.

4. Completed odor sampling and reduction testing at an active cannabis site with the Byers System (see Attachment 7).

Carbon filtration systems (when properly designed and maintained) offer the leading effective odor control for enclosed spaces such as the Project's processing structures. Other regulatory agencies involved with the emerging cannabis industry have recognized carbon filtration as a Best Available Control Technology (BACT) for odor, including the Puget Sound Clean Air Agency[1] in Washington state and the Denver

[1] Refer to: https://pscleanair.gov/DocumentCenter/View/3364/11237-wks

Department of Public Health & Environment[2] in Colorado. If properly designed and maintained, the carbon filtration system should be sufficient to control nuisance odors emanating from the Project's processing structures.

Based on the presumption that the odor control system is operated during all appropriate times that nuisance odors are present on the Project site, the system is kept in good working order, and operated in compliance with manufacturer requirements and guidelines, Ms. Tia Jeter, a professional licensed in the field of environmental engineering, with an MS in Environmental Engineering and BS in Chemical Engineering, hereby certifies that the Odor Management Plan as currently proposed for deployment at the SLO Cultivation Project Site in Carpinteria, California is consistent with equipment and methods to be used for reducing odors which are accepted and available as industry-specific best control technologies and methods designed to mitigate odor.

Tia Jeter

8/10/2021

Signature, Tia M. Jeter Date

1.8 COMPLAINT CONTACT SYSTEM

In accordance with applicable local regulations, SLO Cultivation will have a local contact person which will be available on a 24-hour basis to respond to calls regarding nuisance odor complaints. The phone number and contact information for this contact person will be provided to the County and surrounding land owners, within 1,000 feet of the parcel on which the cannabis activity is conducted, as a component of the required noticing. SLO Cultivation will notify the County and applicable land owners should this local contact number ever change. SLO Cultivation will notify the County of any complaints the operator receives within twenty-four (24) hours of receiving the complaint. The local contact will respond to all calls received regarding odor complaints within a timely fashion. This timely fashion means that an initial complaint call will be responded to within an hour and a corrective action shall commence within two hours of the initial call, if corrective action is required, to address any violation of the County ordinance. SLO Cultivation has prepared a complaint tracking system for

[2] Refer to: https://www.denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/MJ%20Sustainability/Cannabis_BestManagementPracticesGuide_FINAL.pdf

the local contact to use when receiving complaint phone calls. The system includes but is not limited to recording the following information:

1. Contact information of the complainant
2. Date and time that the operator received the complaint
3. Date and time that the nuisance odor observation occurred
4. Approximate location from which the complainant detected the odor
5. Description of the odor observation (i.e. pungent, short-term, long-term, etc.)
6. Description of any activities observed by the complainant at or near the Project Site during the odor observation (trucks entering or exiting the area, uncovered cannabis wastes near the property line, etc.)
7. Description of any specific weather patterns observed by the complainant at or near the Project Site during the odor observation (approximate temperature, calm or strong winds, heavy cloud layer, etc.)
8. Actions the operator implemented in orders to address the complaint.

SLO Cultivation will provide the complaint tracking system records to the County as part of any Planning and Development Departmental (Department) inspections of the cannabis activity, and/or upon the Department's request. SLO Cultivation shall maintain the complaint tracking records for a minimum of five (5) years.

In the event that the department receives three (3) or more verified complaints regarding odor events in a 365-day period, SLO Cultivation shall implement corrective actions to comply with the odor abatement requirements of County Ordinance Section-144U.C.7. Upon the Department's request, SLO Cultivation will submit a written statement that sets forth the corrective actions and timing of implementation of each corrective action, subject to the Department's review and approval. The Department may require the corrective actions to be re-certified by a Professional Engineer or Certified Industrial Hygienist.

1.9 DEPARTMENT ACCESS

SLO Cultivation will allow the department access to the facility at all times, without notice, for the purpose of inspecting odor mitigation practices, odor source(s), and complaint tracking system records.

Attachment 1
Project Vicinity Map

CRESCO
SCS ENGINEERS

North

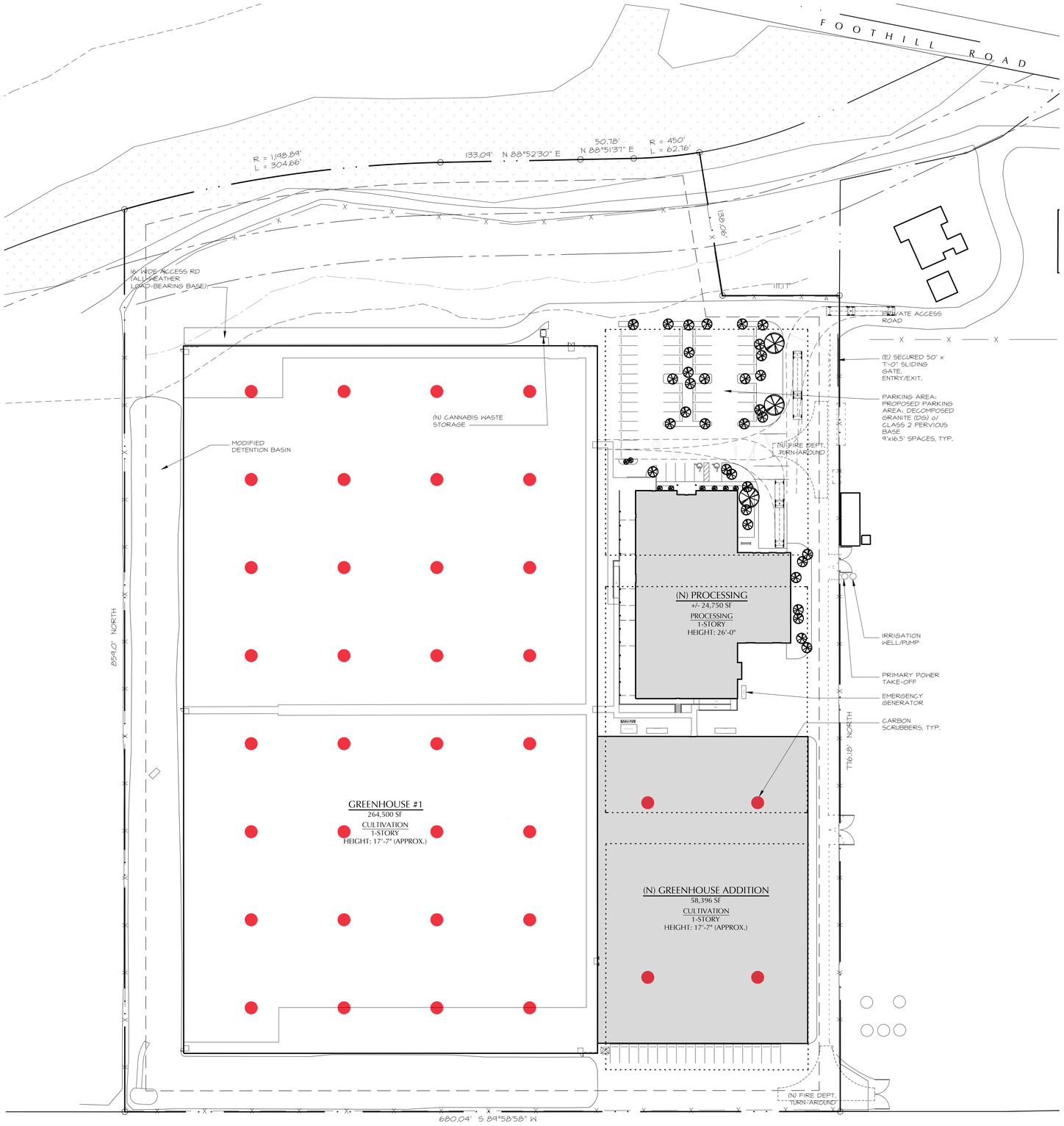
Scale
0 250 500 750 1,000 Feet

PREPARED BY SCS ENGINEERS
JANUARY 2021
GCS, NAD 83
SOURCE: ESRI

Cresco
3861 Foothill Rd
Carpinteria, CA 93103

Zoning Map

Attachment 2
Odor System Site Plans



ODOR CONTROL SITE PLAN

1"=50'

ODOR CONTROL NOTES:

1. Odor Abatement: Dry Vapor Odor Control System (by Byers, U.N.O.) on Concrete Pad. See Odor Abatement Plan by SCS Engineers for Additional Information.
2. Locate Neutralizing Agent and Blower per MFR.
3. Distribution Pipe to be PVC, U.N.O.

BBP

ARCHITECTURE

924 anacapa st
suite: 2-U
santa barbara, ca
93101
805.564.6074

SLO CULTIVATION
3861 Foothill Rd
Carpinteria, CA

--

LICENSED ARCHITECT
CRAIG A. BURNELL
NO. C-20626
REN. 05/21
STATE OF CALIFORNIA

sheet description

ODOR CONTROL PLAN

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date:

8-7-2020
8-20-2020
8-28-2020
9-3-2020
9-9-2020
9-17-2020
12-9-2020
12-18-2020
12-29-2020
1-13-2021
2-3-2021
2-9-2021
2-10-2021
2-18-2021
4-27-2021
6-1-2021
7-6-2021
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sheet no:

A-1.3

Preliminary: NOT FOR CONSTRUCTION

ESH BOUNDARY

20' SETBACK, TYP

(E) CHAIN LINK FENCE

(N) FIRE HYDRANT

PRIVATE ACCESS RD

(E) HOUSE

(E) BARN

(E) GAP

10'-0" TYP

(E) SECURED 50' x 7'-0" SLIDING GATE. ENTRY/EXIT (GATE & FENCE RELOCATED TO PROPERTY LINE).

SHED TO BE REMOVED.

BICYCLE PARKING

FIRE DEPT. HAMMERHEAD

LOADING DOCKS

54'-0"

100' SETBACK FROM TOP OF BANK

TOP OF BANK

CANNABIS WASTE DUMPSTER (RECESS)

ESH 100 FOOT BUFFER

ENVIRONMENTALLY SENSITIVE HABITAT (ESH)

PARKING AREA (PERMEABLE: DECOMPOSED GRANITE w/ CLASS 2 PERVIOUS BASE). 41 SPACES

FOOTPRINT OF GREENHOUSE TO BE REMOVED

BREAK-ROOM PATIO

STORAGE: SHORT TERM FERTILIZER

20' SETBACK, TYP

FOOTPRINT OF GREENHOUSE TO BE REMOVED

STORAGE: LONG TERM FERTILIZER, IPM CHEMICALS & ACTIVE & LONG TERM MEDIA CONTAINERS

BUYER'S

(2) BUYER'S VAPOR PHASE UNIT

D.I. WATER SYSTEM

BACKUP GENERATOR

GREENHOUSE # 1
264,500 SF
CULTIVATION
1-STORY
HEIGHT: 18'-5" (APPROX)

FOOTPRINT OF GREENHOUSE TO BE REMOVED

PARKING AREA
18 SPACES

(N) TRANSFORMER

FERTIGATION EQUIP.

IRRIGATION EQUIP.

20' SETBACK, TYP.

DETENTION BASIN PERIMETER
(SEE CIVIL PLANS FOR DETAILS)

BASIN PLANTER

(N) PROCESSING
+/- 24,750 SF
PROCESSING
1-STORY
HEIGHT: 26'-0"

20' MIN

BLADDER

26'-1"

198'-0"

52'-11"

39'-1"

20' CLR

(N) GREENHOUSE ADDITION
61,840 SF
CULTIVATION
1-STORY
HEIGHT: 18'-5" (APPROX.)

208'-1½"

226'-10"

20' SETBACK, TYP.

RELOCATE FENCE & GATE TO PROPERTY LINE

FIRE DEPT. HAMMERHEAD

43'-5"

LEGEND

- 6" DIAMETER PERIMETER VAPOR RELEASE PIPING (PVC)
- 8" DIAMETER VAPOR TRANSPORT HEADERS (PVC)
- 8" DIAMETER VAPOR TRANSPORT HEADERS (PVC)
- 3" DIAMETER RIDGE VENT VAPOR RELEASE PIPING (PVC)
- 3" DIAMETER RIDGE VENT VAPOR RELEASE PIPING (PVC)

PREPARED BY SCS ENGINEERS
JULY 2021
MODIFIED FROM BBP ARCHITECTURE SITE PLAN
SCS ENGINEERS

N

scale
1"=50'
0 50 100 150 Feet

SLO CULTIVATION
3861 FOOTHILL ROAD
SANTA BARBARA COUNTY, CALIFORNIA

ODOR MANAGEMENT CONTROL - SITE PLAN

Attachment 3
Processing Building Floor Plan

Processing Floor Plan

3/32"=1'-0"

Mezzanine Plan

BBP ARCHITECTURE

924 anacapa st
suite: 2-U
santa barbara, ca
93101
805.564.6074

SLO CULTIVATION
3861 Foothill Rd
Carpinteria, CA

LICENSED ARCHITECT
TRACY A. BURRELL
NO. C-20626
REN. 05/21
STATE OF CALIFORNIA

sheet description

PROCESSING BLDG
FLOOR PLANS

date:

8-7-2020
8-20-2020
8-28-2020
9-3-2020
9-9-2020
9-17-2020
12-9-2020
12-18-2020

sheet no:

A-2

Preliminary: NOT FOR CONSTRUCTION

Attachment 4

Byers Vapor Phase Odor Control System- Technical Brochure

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

Attachment 5

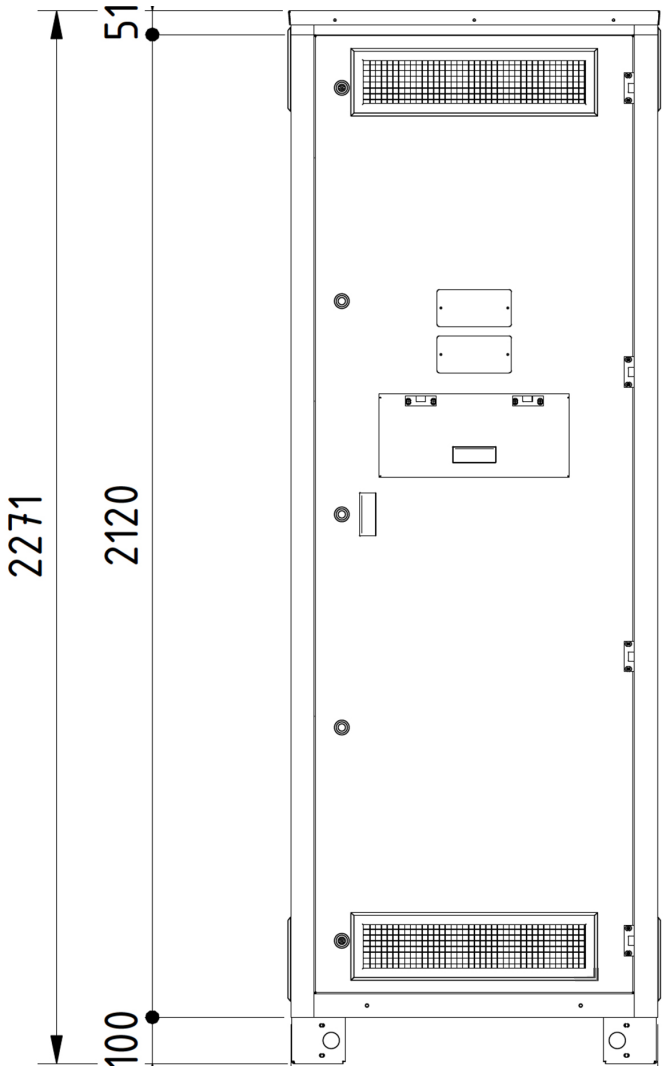
RCSS Scrubber and Ecosorb CNB100/107- Technical Brochures

Solution

Technical specifications

Product Name	CFS-3000
Start	Slow start
Capacity	3,000 m^3/h
Size	2,271 x 800 x 800 mm
Weight	350 KG
Materials	Powder coated steel
Power input	480 VAC - 3 Phase delta

1 kWatt (1 amp 480)



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Ph: (812) 269-6218

ECOSORB® CNB 100 TECHNICAL DATA SHEET

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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

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Industrial Odor Management

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ECOSORB® CNB 100 TECHNICAL DATA SHEET

ECOSORB® Odor Control Solutions

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

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

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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

Attachment 6
Santa Barbara APCD- Cannabis Odor Control Presentation

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.

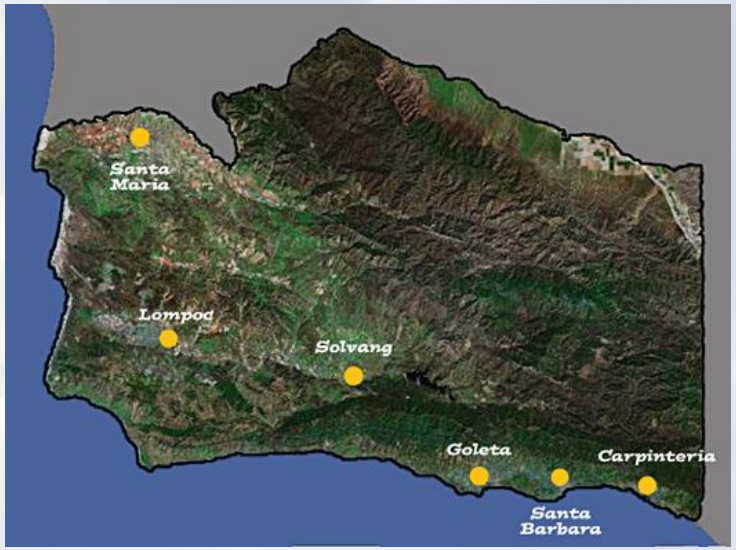
Aeron Arlin Genet
Director / APCO

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

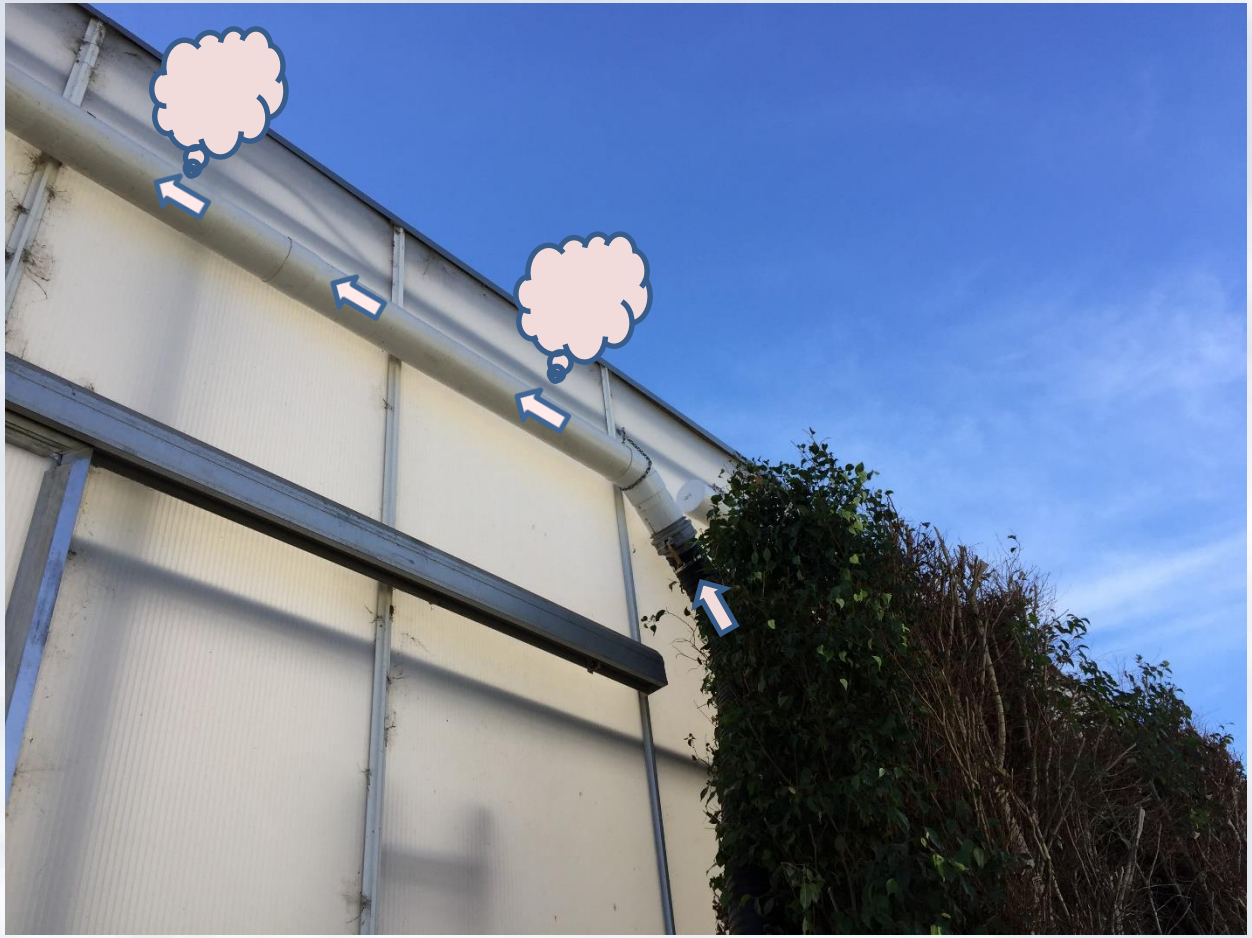
Holding Tank
(Ecosorb CNB 100)

High pressure, low volume blower

Evaporation Tank
(confidential)

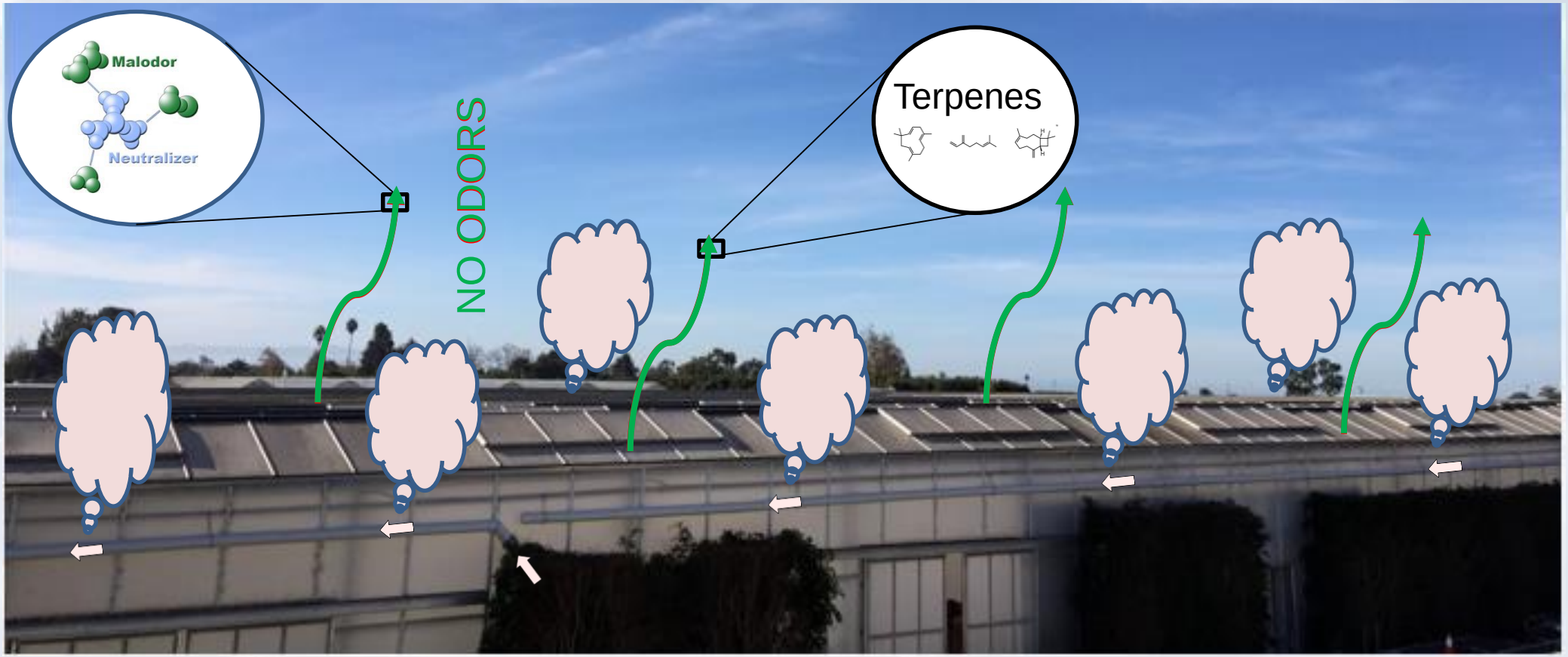
Santa Barbara County
Air Pollution Control District

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

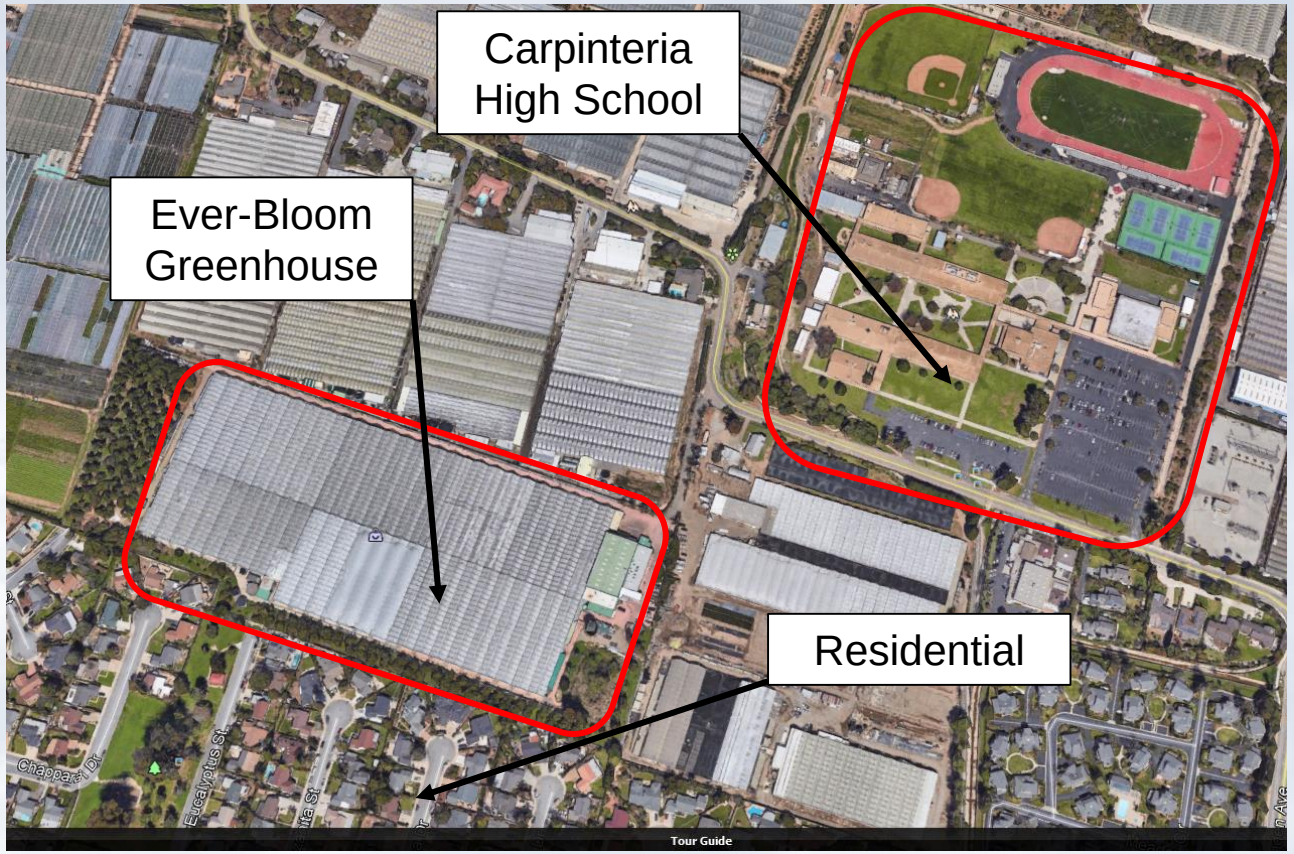
Considerations

- 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)

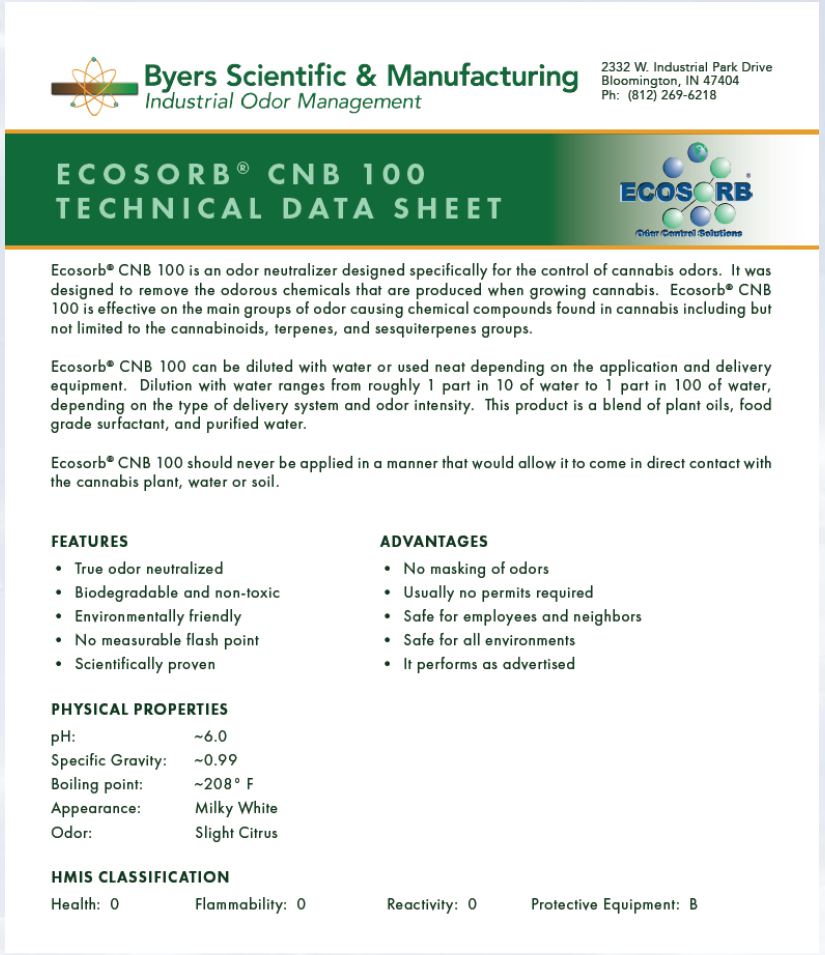
- Also operational at Miramar Landfill in San Diego as well as composting and landfill operations throughout the US

Santa Barbara County
Air Pollution Control District

Questions

Santa Barbara County
Air Pollution Control District

Ecosorb CNB 100 Data Sheet



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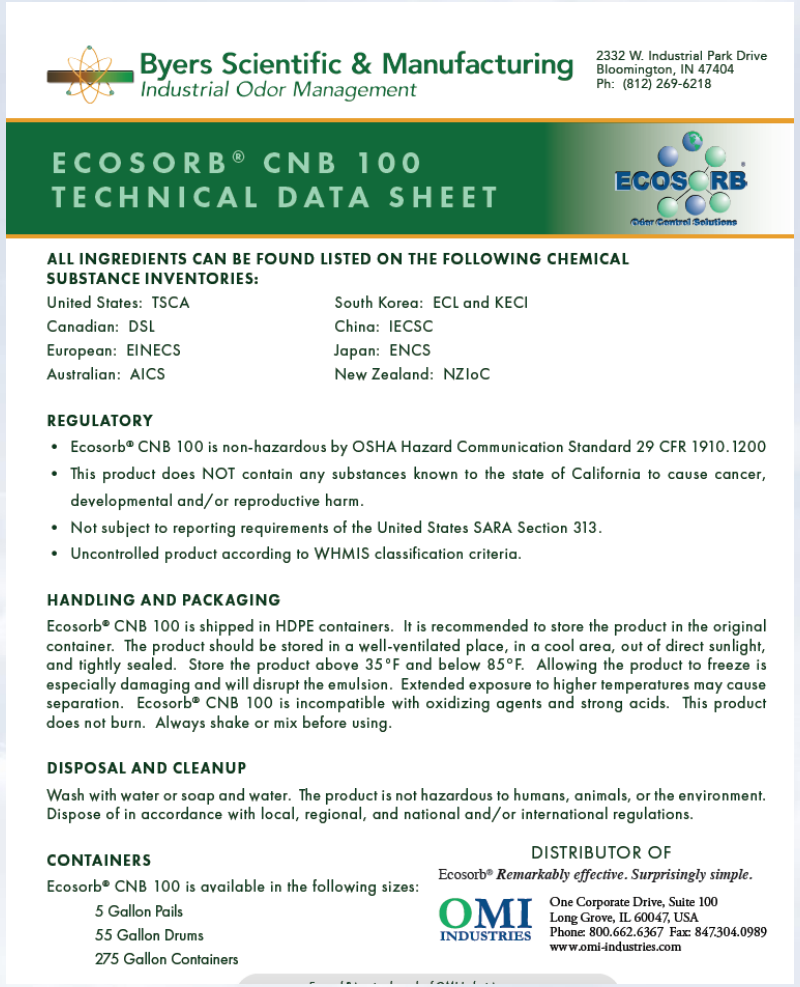

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Santa Barbara County
Air Pollution Control District

Attachment 7
SCS Odor Control Site Testing

Environmental Consultants
and Contractors

2370 Skyway Drive
Suite 101
Santa Maria, CA 93455

805-346-6591

www.scsengineers.com

SCS ENGINEERS

Formerly Tracer Environmental Sciences & Technologies, Inc., now a part of SCS Engineers.

September 30, 2019

Santa Barbara County Planning Commission
Planning & Development Department
123 East Anapamu Street
Santa Barbara, CA 93013

Subject: CARP Case Study- Cannabis Odor Management

To Commissioners:

SCS Engineers (SCS) would like to note that due to our firm's broad background in environmental engineering, and odor management specifically, we have been retained by the Carpinteria Association of Responsible Producers (CARP) for the purposes of analyzing and addressing cannabis odors related to client facilities in the region. SCS is an industry leader in the assessment of odor emissions and mitigation methods across North America. SCS has provided environmental solutions for various land uses including but not limited to landfills, wastewater treatment plants, and agricultural & food processing facilities for over forty (40) years.

We recently completely a site specific analysis of an active cannabis facility located at 5138 Foothill Road in Carpinteria (Project Site/Facility). SCS field staff confirmed that the Project Facility was similar to proposed cannabis greenhouses throughout the region with adult-flowering cannabis, ancillary cannabis processing, operable roof vents, and an active odor neutralizing vapor system. SCS collected a suite of fourteen (14) total odor samples at strategically appropriate times and locations in an effort to capture potential maximum odors during calm winds (morning samples), steady winds (afternoons), with the Project Facilities' roof vents open, and with active cannabis processing occurring. These sample collections included upwind locations to determine an odor baseline for the region without cannabis, samples taken inside the greenhouse to reflect unmitigated odor released from cannabis cultivation or processing, and samples taken outside the greenhouse, downwind to capture odor conditions after the application of the odor neutralizing vapor.

These samples were then shipped to an independent third-party laboratory (Odor Science and Engineering, Incorporated in Bloomfield, Connecticut) for analysis. The OS&E laboratory has an expert odor panel which conducts blind evaluations of the odor samples (the panel is not informed of the potential type or source of the samples). The odor panel provides both a character (i.e. sour, skunk, exhaust, garbage) and an intensity for each odor sample. The intensity of odor is quantified as a dilution to threshold ratio (D/T) with higher numbers reflecting stronger odors. For example, the baseline odors present in most communities range from 8-12 D/T. Eight (8) D/T represents eight (8) parts of clean, purified air for each unit of odor sample. The specially trained and qualified odor panelists can often detect a net increase of 3-5 D/T over this baseline condition. Members of the general public can typically detect a net increase of 5-10 D/T. As a result, SCS typically considers a persistent net increase of odor intensity of seven (7) D/T or greater above baseline to be a nuisance odor detectable by the public.

Results from the case study indicated that the upwind/baseline odor present in Carpinteria had an intensity of twelve (12) D/T with a character commonly including odor descriptors such as: sour, stale, sulfur, and exhaust. Samples of unmitigated cannabis odors within the Project Site's greenhouse ranged from a net increase in odor intensity of 151 D/T (adult-flowering plants) to 238 D/T (adult-flowering plants plus processing) with a character commonly including odor descriptors such as: skunk, mercaptan, and marijuana/pot. Samples taken outside the Project Site's greenhouse with odor mitigation from the neutralizing vapor had a maximum net increase in odor intensity of three (3) D/T with eight (8) out of ten (10) samples showing no net increase in odor intensity. Because all mitigated odor samples remained significantly below a net increase of seven (7) D/T in intensity, no nuisance level odors are anticipated from the Project Facility. Typical malodor characters observed in these mitigated samples returned to sour, exhaust, and garbage similar to the background sample. Malodors character such as skunk or mercaptan were only observed in two (2) out

of the ten (10) mitigated samples which had net odor intensities of negative one (-1) and three (3) D/T respectively. With D/T of less than seven (7) these odors are unlikely to be detected by the surrounding public. It also important to note that the downwind odor sample locations were taken at a range of 30-165 feet from the exterior walls of the greenhouse, far closer than the 600 foot distance to the nearest sensitive receptor. Natural dispersion and dilution would continue to reduce remnant odors.

Based upon this initial case study, SCS' findings conclude that the odor neutralizing vapor system was:

- Successfully eliminating 98.7% or more of cannabis odors in distances as little as thirty (30) feet.
- Performing on par with other leading odor control technologies including carbon filtration.
- The system was successfully mitigating odors even with roof vents open and higher intensity odor activities such as cannabis processing occurring during the odor sampling events.

SCS will continue to work with the cannabis industry to implement environmental solutions, including evolving odor management technology. Our staff are available as a resource should the Commission have additional questions and concerns regarding odor management in the region. We have appended a complimentary slide deck to this memorandum for a graphical illustration of this case study analysis.

Sincerely,

Nathan Eady
Land Use Planner/Project Director

Paul Schafer
Air Quality Specialist/Project Director

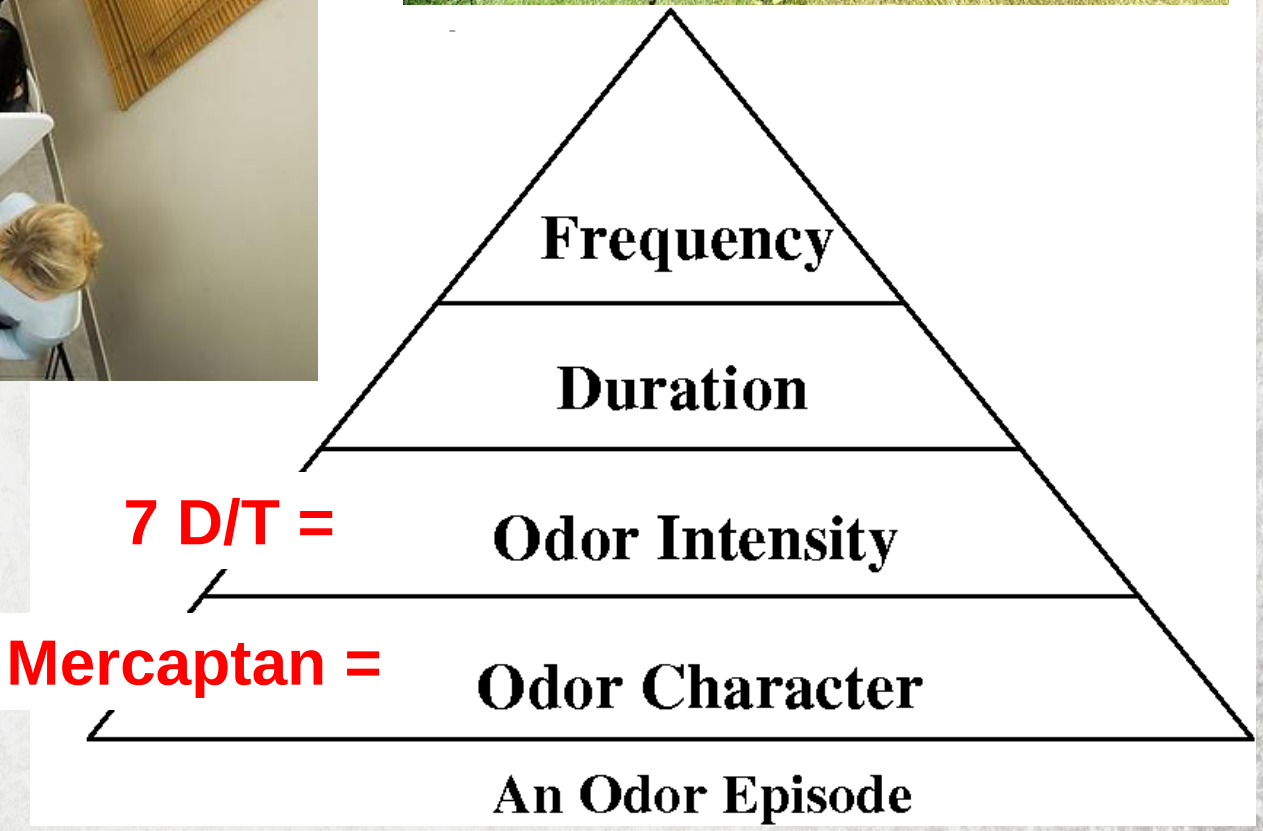
CARPINTERIA AIR QUALITY SAMPLING
CASE STUDY RESULTS & CONCLUSIONS

SCS ENGINEERS
www.scsengineers.com
August 2019

CASE STUDY FINDINGS
CARPINTERIA, CALIFORNIA

- Vapor Odor Neutralizing System reduced odors by 98.7% or better; measured at distances as little as 30 feet from greenhouse.
- Vapor phase performed as good as carbon filtration and is more effective for large volume air spaces such as greenhouses; vapor can also abate odors that escape the primary structure.
- Structure makes a difference, the system performed efficiently with open roof vents.
- Vapor phase system effectively abated odor during harvesting/processing phase, the most odor intensive stage of cannabis cultivation observed.
- Iterations in the technology & application have improved the efficacy of odor neutralizing systems.

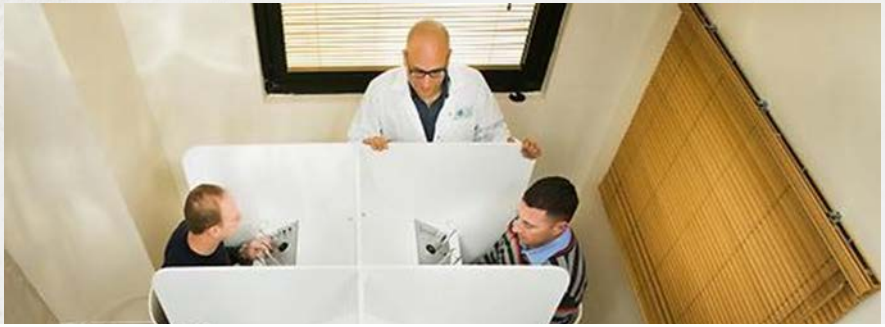
METHODOLOGY
ODOR SAMPLE ANALYSIS



7 D/T =

Skunk or Mercaptan =

METHODOLOGY
ODOR SAMPLE ANALYSIS



Odor Science & Engineering, Inc.
105 Filley Street, Bloomfield, CT 06002
(860) 243-9380 Fax: (860) 243-9431
www.odorscience.com

August 13, 2019

Paul Schafer
SCS Engineers
5963 LaPlace Court
Suite 207
Carlsbad, CA 92008

PSchafer@scsengineers.com

RE: Odor Panel Analysis – August 8, 2019
OS&E Project No. 2151-M-00
SCS Sampling Site: CARP

Dear Paul:

This letter presents the results of the recent odor panel analyses conducted by Odor Science & Engineering, Inc. (OS&E) for SCS Engineers. A total of fourteen (14) odor emission samples were collected on August 7th, 2019 by on-site SCS personnel. The odor samples were collected into Tedlar gas sampling bags provided by OS&E. Following sample collection, the sample bags were shipped via UPS Overnight to OS&E's Olfactory Laboratory in Bloomfield, CT for sensory analysis the next day. The samples arrived intact with a chain of custody requesting sensory analysis attached.

Upon arrival the samples were analyzed by dynamic dilution olfactometry using a trained and screened odor panel of 8 members. The odor panelists were chosen from OS&E's pool of panelists from the Greater Hartford area who actively participate in ongoing olfactory research and represent an average to above average sensitivity when compared to a large population. The samples were quantified in terms of dilution-to-threshold (D/T) ratio and odor intensity in accordance with ASTM Methods E-679-04 and E-544-10, respectively. The odor panelists were also asked to describe the odor character of the samples at varying dilution levels. The odor panel methodology is further described in Attachment A.

The results of the odor panel tests are presented in the attached Table.

We appreciate the opportunity to be of continued service to SCS Engineers. Please feel free to call Martha O'Brien or me if you have any questions concerning these results.

Sincerely,
ODOR SCIENCE & ENGINEERING, INC.

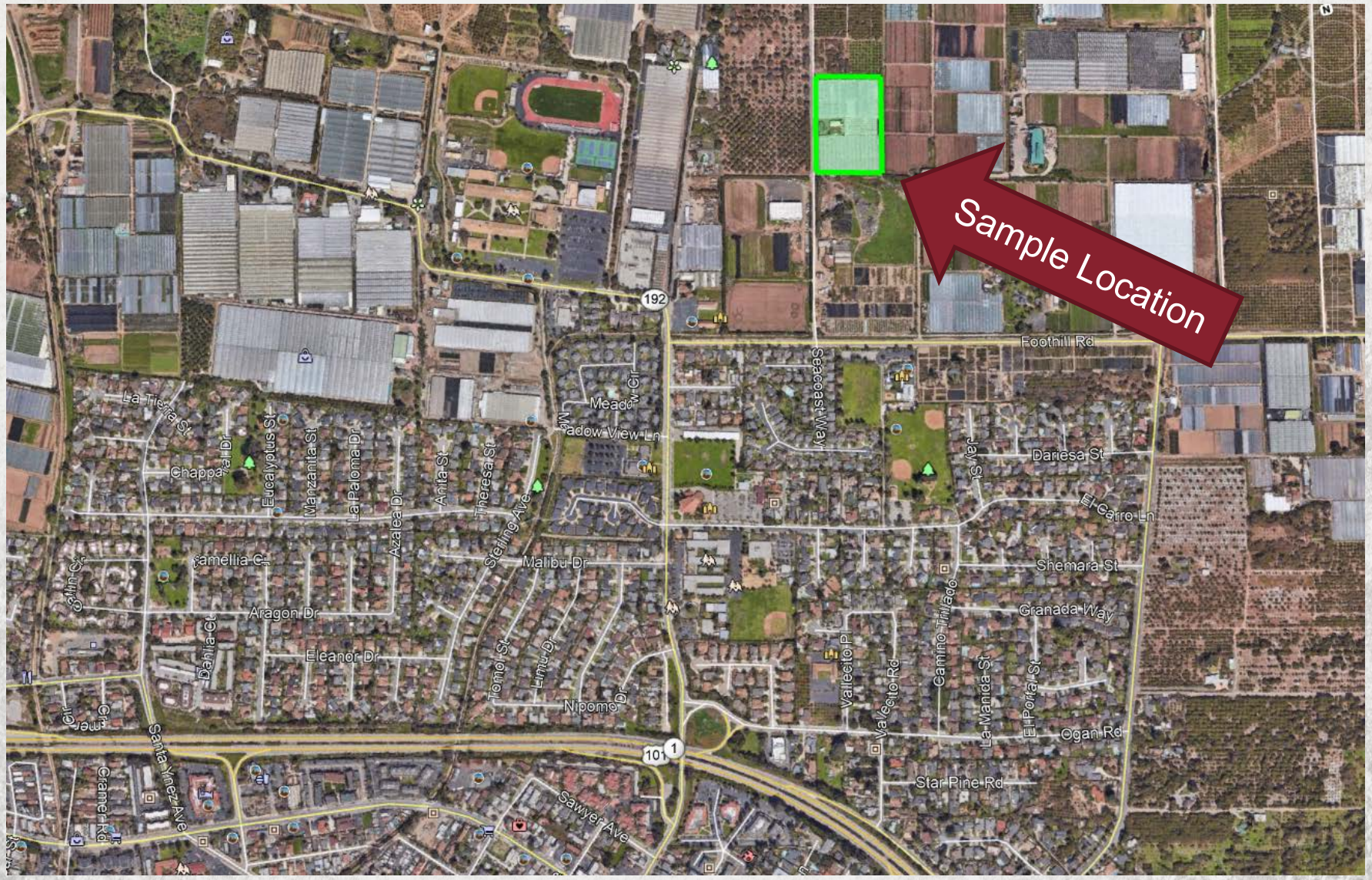
Gary K. Grumley
Associate Scientist

Table 1. Results of dynamic dilution olfactome
SCS Engineers – Sampling S
OS&E Project No. 2151

Date	Time	Sample ID	Odor Conc. D/T[1]	Stevens' Law Constants[2] a	b	
8/07/2019	07:12	AM-S1	9	--	--	sour, rubber, burn
8/07/2019	07:17	AM-S2	11	--	--	stale, musty, onio
8/07/2019	07:21	AM-S3	12	--	--	sour, sweet, rubber, garbage, exhaust, rubber, plastic, exhaust
8/07/2019	07:29	AM-E	9	--	--	sour, rubber, garbage, sewage, plastic, burnt, exhaust
8/07/2019	06:52	AM-UP	12	--	--	sour, stale, sulfur, H_2S, rubber, exhaust
8/07/2019	07:11	AM-W	9	--	--	sour, plastic, swampy, sulfur, exhaust
8/07/2019	07:23	AM-GH	163	.44	.76	skunk, rotten, mercaptan, burnt sulfur
8/07/2019	13:48	PM-GH	250	.53	.89	skunk, dead skunk, marijuana/"pot"
8/07/2019	13:36	PM-N1	13	--	--	sour, rubber, glue, paste, putty, plastic, exhaust
8/07/2019	13:33	PM-L1	11	--	--	sour, sweet, rubber, garbage, exhaust, rubber, floor chemical, plastic, exhaust
8/07/2019	13:25	PM-M2	12	--	--	sour, burnt, rubber, sewage, garbage, exhaust, plastic, exhaust
8/07/2019	13:30	PM-L2	9	--	--	sour, sweet, rubber, musty, vegetation, chemical, plastic, exhaust
8/07/2019	13:21	PM-M1	15	--	--	rotten, skunk, mercaptan, garlic, sulfur, sewage, plastic, exhaust
8/07/2019	13:20	PM-UP	12	--	--	sour, sulfur, sewage, H_2S, stale, plastic, exhaust

METHODOLOGY

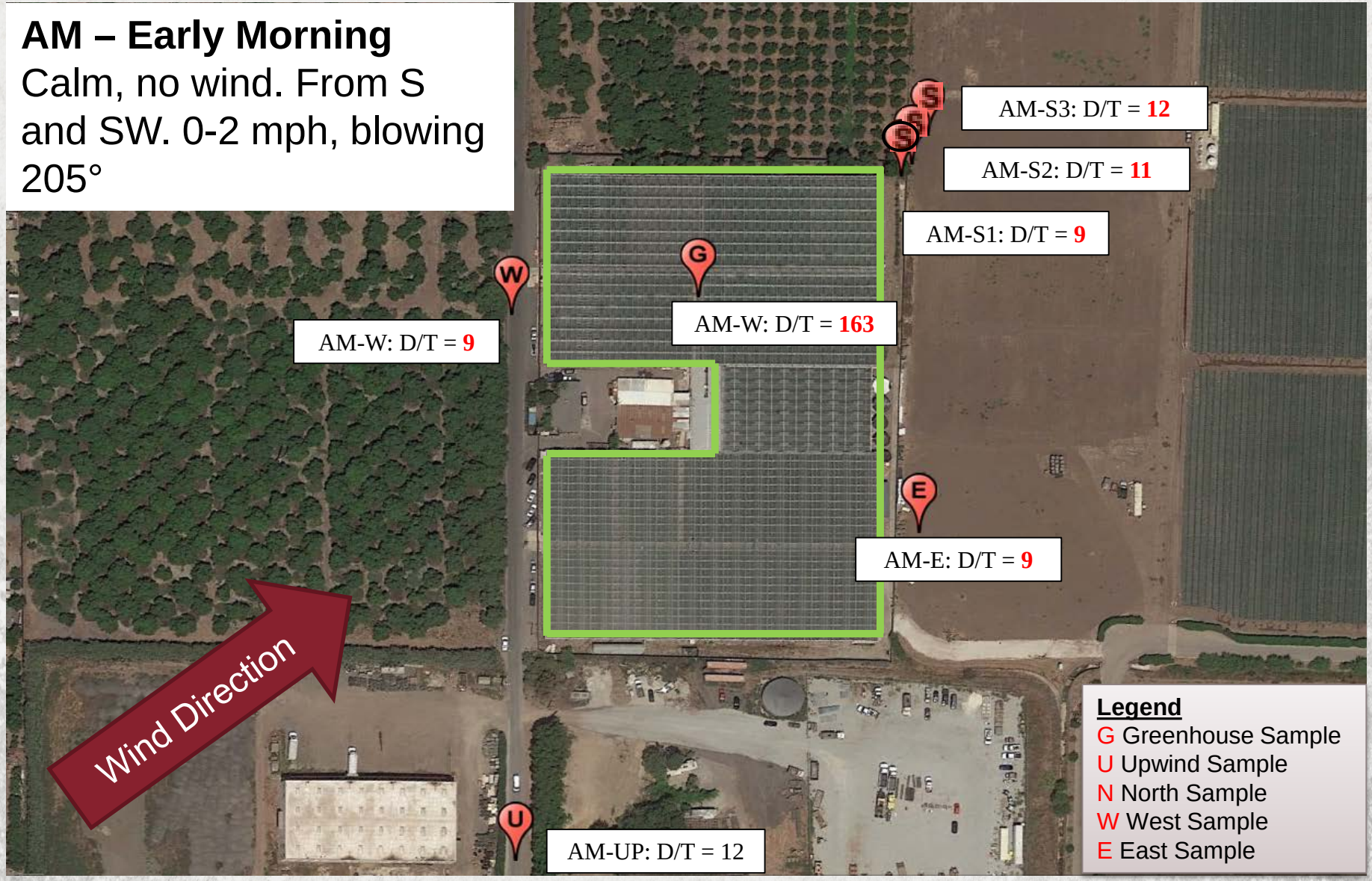
ODOR SAMPLE ANALYSIS



AIR SAMPLING RESULTS (WITH BASELINE)

ODOR INTENSITY AND CHARACTER

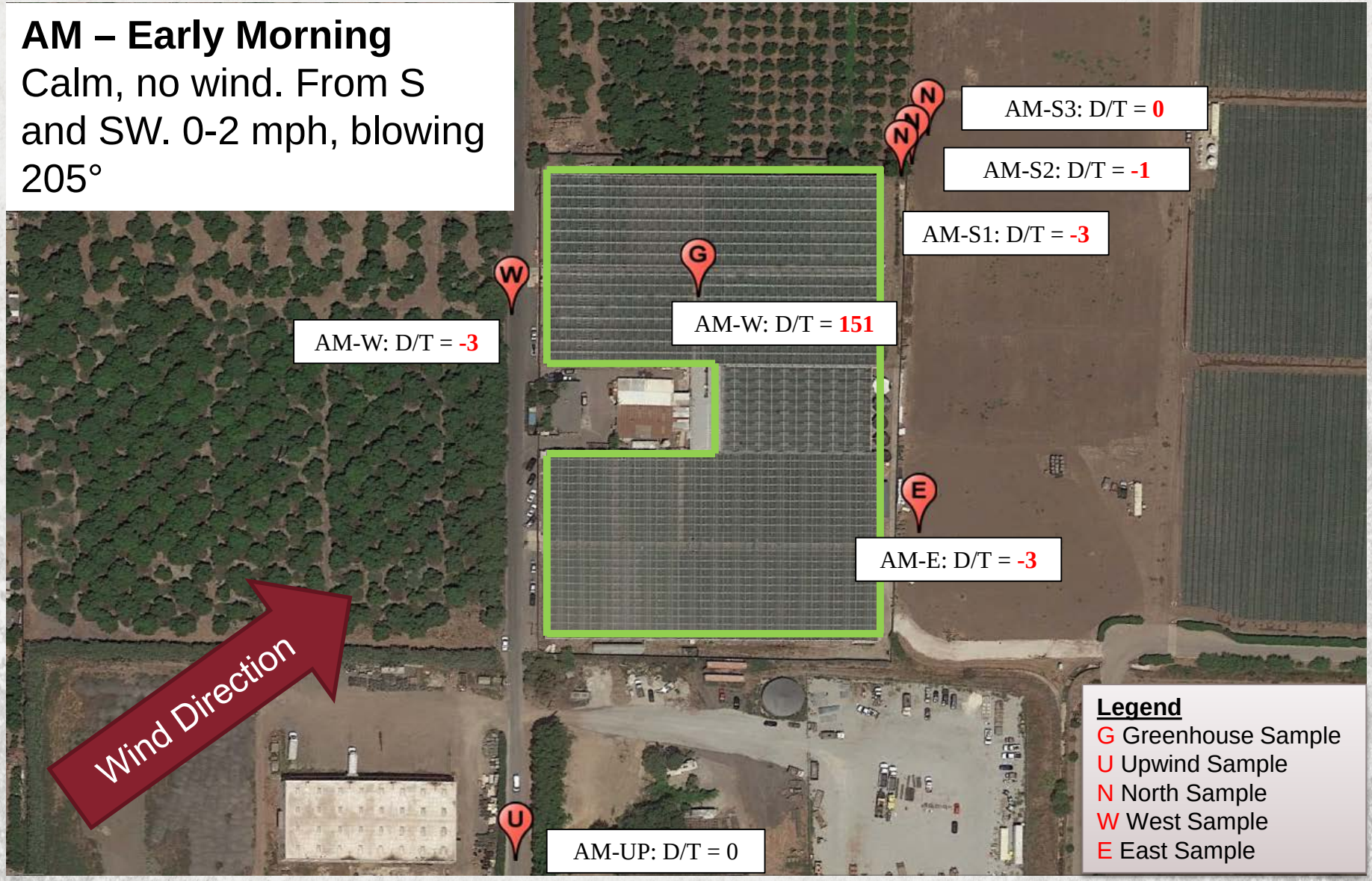
AM – Early Morning
Calm, no wind. From S and SW. 0-2 mph, blowing 205°



AIR SAMPLING RESULTS (NET INCREASE)

ODOR INTENSITY AND CHARACTER

AM – Early Morning
Calm, no wind. From S and SW. 0-2 mph, blowing 205°



AIR SAMPLING RESULTS

ODOR INTENSITY AND CHARACTER

AM – Early Morning
Calm, no wind. From S and SW. 0-2 mph, blowing 205°

ODOR INTENSITY WITH BASELINE

Baseline/Upwind Intensity & Character	In Greenhouse Gross Intensity Increase & Character	Short-Range (0-30 feet) Gross Intensity Increase & Character	Medium-Range (Approx. 31-60 feet) Gross Intensity Increase & Character	Long-Range (Approx. more than 60 feet) Gross Intensity Increase & Character
12 sour, stale, sulfur, H_2S, rubber, exhaust	**163** skunk, rotten, mercaptan, burnt sulfur	**9** sour, rubber, burning, plastic, musty, moldy, light sewage, exhaust	**11** stale, musty, oniony, mercaptan, sewage, H_2S, plastic, wet cardboard, exhaust	**12** sour, sweet, rubber, garbage, exhaust, rubber, plastic, exhaust
			9 sour, rubber, garbage, sewage, plastic, burnt, exhaust	
			9 sour, plastic, swampy, sulfur, exhaust	

AIR SAMPLING RESULTS
ODOR INTENSITY AND CHARACTER

AM – Early Morning
Calm, no wind. From S and SW. 0-2 mph, blowing 205°

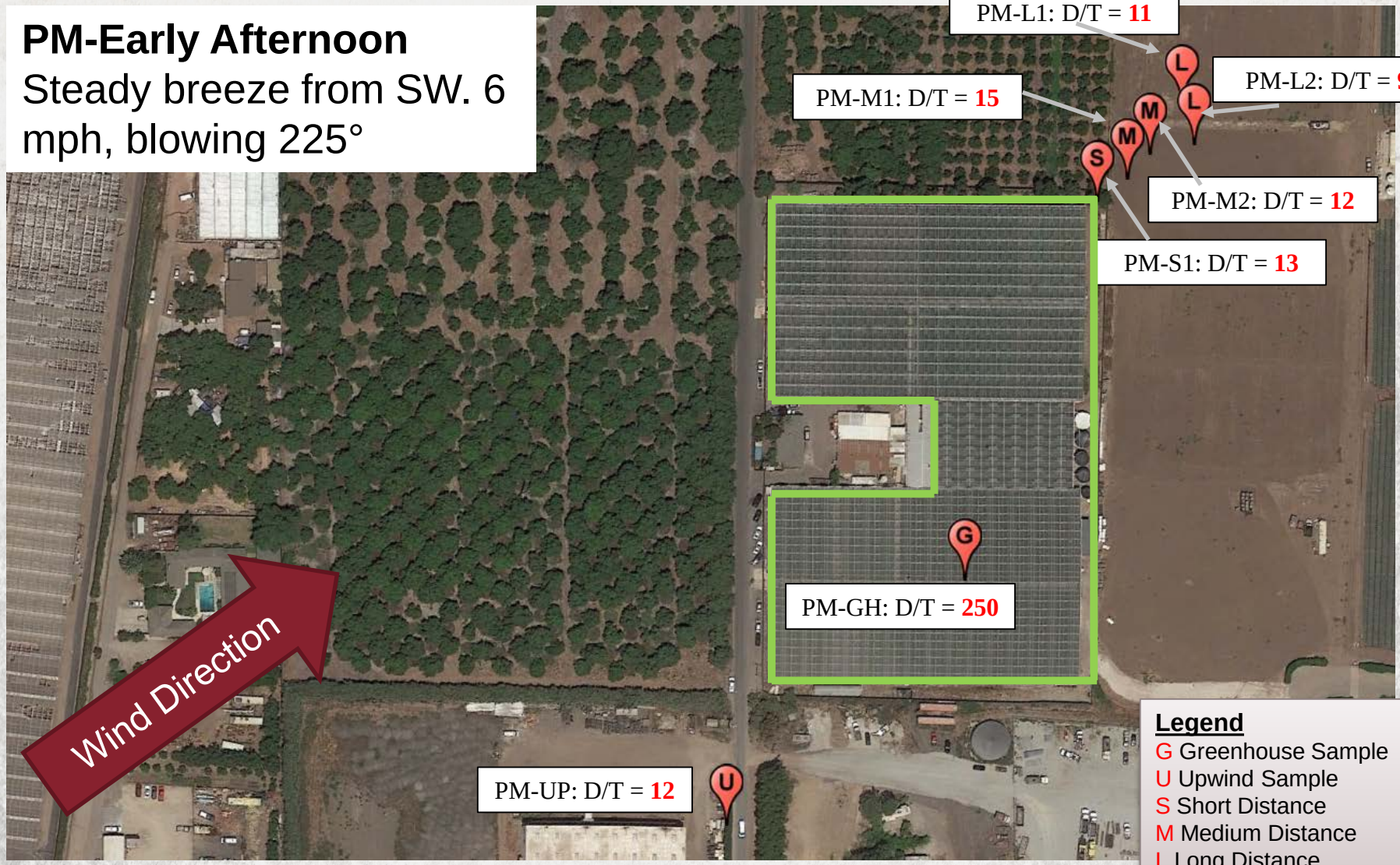
NET INCREASE ODOR INTENSITY

Baseline/Upwind Intensity & Character	In Greenhouse Net Intensity Increase & Character	Short-Range (0-30 feet) Net Intensity Increase & Character	Medium-Range (Approx. 31-60 feet) Net Intensity Increase & Character	Long-Range (Approx. more than 60 feet) Net Intensity Increase & Character
0 sour, stale, sulfur, H2S, rubber, exhaust	**151** skunk, rotten, mercaptan, burnt sulfur	**-3** sour, rubber, burning, plastic, musty, moldy, light sewage, exhaust	**-1** stale, musty, oniony, mercaptan, sewage, H2S, plastic, wet cardboard, exhaust **-3** sour, rubber, garbage, sewage, plastic, burnt, exhaust **-3** sour, plastic, swampy, sulfur, exhaust	**0** sour, sweet, rubber, garbage, exhaust, rubber, plastic, exhaust

AIR SAMPLING RESULTS (WITH BASELINE)

ODOR INTENSITY AND CHARACTER

PM-Early Afternoon
Steady breeze from SW. 6 mph, blowing 225°



AIR SAMPLING RESULTS (NET INCREASE)

ODOR INTENSITY AND CHARACTER

PM-Early Afternoon
Steady breeze from SW. 6 mph, blowing 225°

Legend
G Greenhouse Sample
U Upwind Sample
N North Sample
W West Sample
E East Sample

AIR SAMPLING RESULTS
ODOR INTENSITY AND CHARACTER

PM-Early Afternoon
Steady breeze from SW. 6 mph, blowing 225°

ODOR INTENSITY WITH BASELINE

Baseline/Upwind Intensity & Character	In Greenhouse Gross Intensity Increase & Character	Short-Range (50 feet) Gross Intensity Increase & Character	Medium-Range (Approx. 75 feet) Gross Intensity Increase & Character	Long-Range (Approx. 165 feet) Gross Intensity Increase & Character
12 sour, sulfur, sewage, H_2S, stale, plastic, exhaust	**250** skunk, dead skunk, marijuana/"pot"	**13** sour, rubber, glue, paste, putty, plastic, exhaust	**12** sour, burnt, rubber, sewage, garbage, exhaust, plastic, exhaust	**9** sour, sweet, rubber, musty, vegetation, chemical, plastic, exhaust
			15 rotten, skunk, mercaptan, garlic, sulfur, sewage, plastic, exhaust	**11** sour, sweet, rubber, garbage, exhaust, rubber, floor chemical, plastic, exhaust

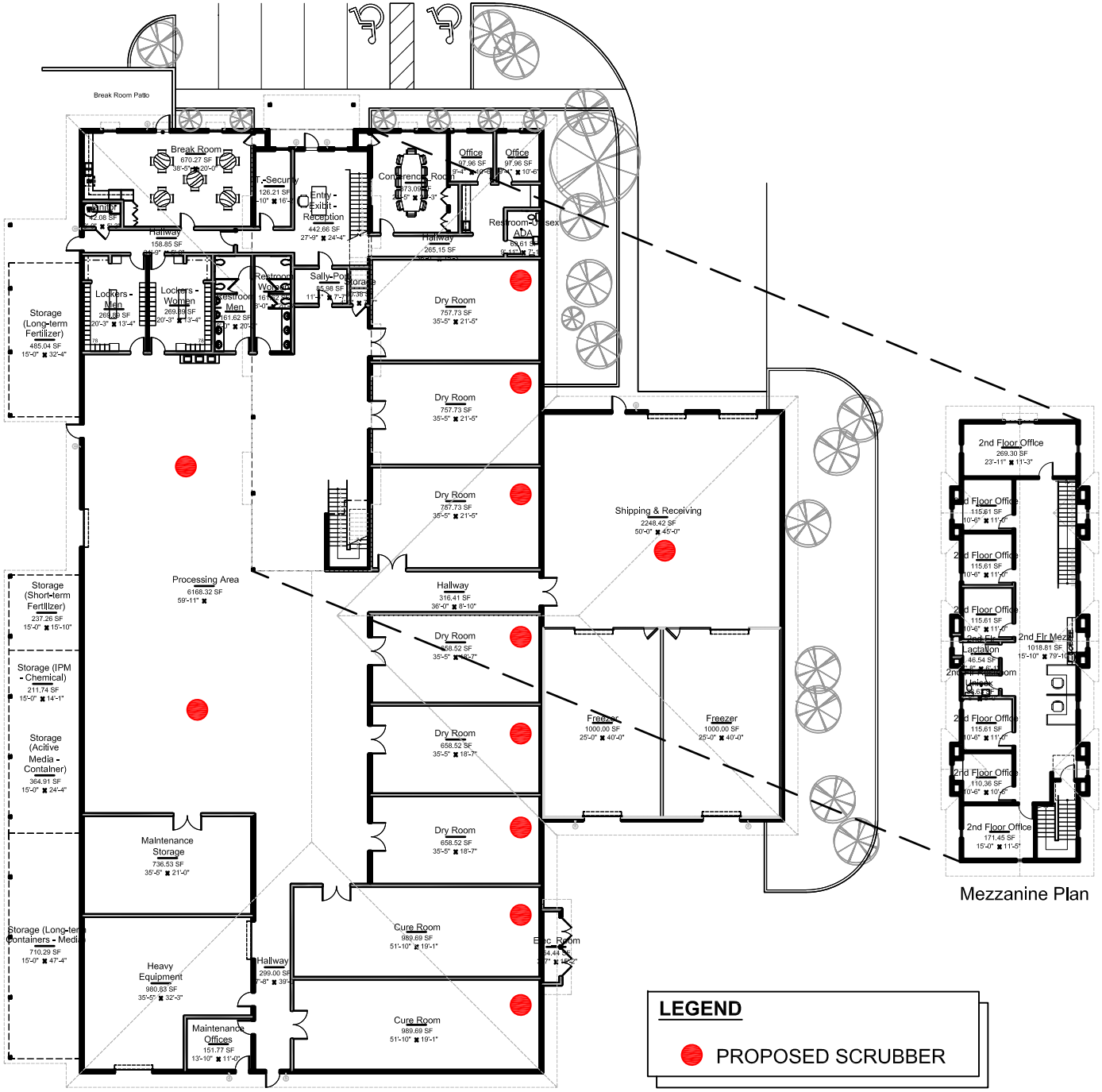
AIR SAMPLING RESULTS
ODOR INTENSITY AND CHARACTER

PM-Early Afternoon
Steady breeze from SW. 6 mph, blowing 225°

NET INCREASE ODOR INTENSITY

Baseline/Upwind Intensity & Character	In Greenhouse Net Intensity Increase & Character	Short-Range (50 feet) Net Intensity Increase & Character	Medium-Range (Approx. 75 feet) Net Intensity Increase & Character	Long-Range (Approx. 165 feet) Net Intensity Increase & Character
0 sour, sulfur, sewage, H2S, stale, plastic, exhaust	**238** skunk, dead skunk, marijuana/"pot"	**1** sour, rubber, glue, paste, putty, plastic, exhaust	**0** sour, burnt, rubber, sewage, garbage, exhaust, plastic, exhaust	**-3** sour, sweet, rubber, musty, vegetation, chemical, plastic, exhaust
			3 rotten, skunk, mercaptan, garlic, sulfur, sewage, plastic, exhaust	**-1** sour, sweet, rubber, garbage, exhaust, rubber, floor chemical, plastic, exhaust

Attachment 8
Processing Building- Odor Scrubber Location Plan


Break Room Patio
Break Room
670.27 SF
Janitor
72.08 SF
Hallway
158.85 SF
T -Security
126.21 SF
Entry - Exhibit - Reception
442.66 SF
Conference Room
373.09 SF
Office
97.96 SF
Office
97.96 SF
Hallway
265.15 SF
Restroom-Unisex ADA
69.61 SF
Lockers - Men
269.30 SF
Lockers - Women
269.30 SF
Restroom Men
161.62 SF
Restroom Women
161.62 SF
Sally-Port
65.98 SF
Storage
Storage (Long-term Fertilizer)
485.04 SF
15'-0" x 32'-4"
Dry Room
757.73 SF
35'-5" x 21'-5"
Dry Room
757.73 SF
35'-5" x 21'-5"
Dry Room
757.73 SF
35'-5" x 21'-5"
Shipping & Receiving
2248.42 SF
50'-0" x 45'-0"
Processing Area
6188.32 SF
59'-11" x
Hallway
316.41 SF
36'-0" x 8'-10"
Storage (Short-term Fertilizer)
237.26 SF
15'-0" x 15'-10"
Storage (IPM - Chemical)
211.74 SF
15'-0" x 14'-1"
Storage (Acitive Media - Contalner)
364.91 SF
15'-0" x 24'-4"
Dry Room
658.52 SF
35'-5" x 18'-7"
Dry Room
658.52 SF
35'-5" x 18'-7"
Dry Room
658.52 SF
35'-5" x 18'-7"
Freezer
1000.00 SF
25'-0" x 40'-0"
Freezer
1000.00 SF
25'-0" x 40'-0"
Maintenance Storage
736.53 SF
35'-5" x 21'-0"
Storage (Long-term Containers - Medi
710.29 SF
15'-0" x 47'-4"
Heavy Equipment
980.83 SF
35'-5" x 32'-3"
Hallway
299.00 SF
7'-8" x 39'-
Maintenance Offices
151.77 SF
13'-10" x 11'-0"
Cure Room
989.69 SF
51'-10" x 19'-1"
Cure Room
989.69 SF
51'-10" x 19'-1"
Exp. Room
64.48 SF
7'-7" x 8'-5"
2nd Floor Office
269.30 SF
23'-11" x 11'-3"
2nd Floor Office
115.61 SF
10'-6" x 11'-0"
2nd Floor Office
115.61 SF
10'-6" x 11'-0"
2nd Floor Office
115.61 SF
10'-6" x 11'-0"
2nd Flr Mezz
1018.81 SF
15'-10" x 79'-10"
Lactation
46.54 SF
2nd Floor Office
115.61 SF
10'-6" x 11'-0"
2nd Floor Office
110.36 SF
10'-6" x 10'-6"
2nd Floor Office
171.45 SF
15'-0" x 11'-5"
Mezzanine Plan
LEGEND
PROPOSED SCRUBBER