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COMPOST COALITION

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July 8, 2019

Delivered via email to rcave@baaqmd.gov

Mr. Robert Cave, Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

SUBJECT: Rule 13-2 Comments

Dear Mr. Cave:

The California Compost Coalition (CCC) is a statewide organization representing operators of permitted facilities, which are involved in the handling, processing, and composting of organic materials both outside and within the Bay Area Air Quality Management District (District). On behalf of these companies, we respectfully submit the following comments on the proposed Rule 13-2 for Organic Material Handling and Composting Operations.

The CCC appreciates the opportunity to comment on the proposed rule and looks forward to continued participation throughout the rule development process. While our members are ardent supporters of environmental protection and the implementation of sustainable practices that will benefit the citizens of our state, we believe the control measures and management practices adopted in your final rule cannot be overly aggressive in their scope, burdensome in their application, or hamper the ability of local jurisdictions to meet the landfill diversion mandates of AB 939 and SB 1383. We have seen a significant dampening effect on facility development, due to the steep regulatory cost burden, in both the San Joaquin Valley (subsequent to the adoption of Rule 4566) and South Coast (following the adoption of Rule 1133.3) regional airsheds, which we are hopeful will not occur as an outcome of the proposed Rule 13-2, but seems likely due to the unreasonable requirements of current draft language. Our key concerns are noted below.

The District has conducted inadequate outreach to the regulated community.

CCC estimates that the proposed rule will impact well over 100 facilities and the jurisdictions they serve. Beyond our members, we have reached out to dozens of material recovery facility and solid waste transfer facility operators over the last few weeks, the large majority of which had received no notification from the District regarding this rule. Most of these operators already hold permits from the District for their operations and equipment. Many of them belong to solid waste trade organizations (who could have been provided the information to disseminate, but also received no notice) and therefore, were under significant duress to try and respond in the last few days, once aware of this rulemaking. The outreach effort on this rule does not appear to be commensurate with other rulemaking conducted by the District.

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The proposed rule lacks clarity and creates unnecessary confusion by failing to clearly define requirements for solid waste transfer and processing operations.

In its current draft, the rule creates regulatory confusion for municipal solid waste (MSW) transfer and processing operators. Given the differences in processing timelines and limited residence time for materials already required for MSW transfer and processing (at Material Recovery Facilities (MRFs) or Transfer Stations), there appears to be no distinction from composting operations – where materials are expected to remain for extended periods.

MSW is not clearly defined and no minimum standard for putrescible materials content is identified; it is unclear at what level of putrescible materials receipt compliance with this rule is required. Is the receipt of any amount of putrescible material in received solid waste a trigger for coverage under this rule?

During the District's public meetings in 2018, there was no discussion of solid waste transfer and processing facilities being included with composting operations in the manner in which this rule has been developed. In fact, throughout the rule development process, District staff had clearly stated and provided documentation that there would be two separate rules, Rule 2 and Rule 3, for organic material handling operations and composting operations. We recommend that the District continue down the intended pathway toward separate rules that provide unambiguous, achievable standards for these two industry sectors.

The proposed implementation schedule for the rule is unreasonable and impossible to achieve for a majority of facilities.

By proposing an implementation timeline of six months, the District has failed to understand the real-world requirements of other regulatory agencies and local planning processes, in both time and money, for the addition of the proposed structures and improvements that would need to be employed at nearly all facilities. The following areas of concern need to be given due consideration and verified with the appropriate oversight agency(ies):

- Land use and CEQA approvals – In most cases the addition of structures will likely require approval from local planning agencies, in accordance with California Environmental Quality Act (CEQA) requirements. Typical approval processes for developing the application documentation, which will include design and engineering work, other study work of potential environmental impacts, and processing time for the agency that can range up to 3 to 5 years, depending upon the complexity of the issues surrounding the project.
- Solid waste permitting modifications and revisions – nearly all of the regulated entities also operate under California Code of Regulations, Title 14 (and Title 27) requirements under oversight by the California Department of Resources Recycling and Recovery (CalRecycle), and implemented by their Local Enforcement Agency (LEA). The addition of structures, buildings, and other modifications to currently-permitted operations will require modifications or revisions to the Solid Waste Facility Permit (SWFP) documentation for each facility. This process may be completed within six months to one year, but often extends beyond that timeframe and is typically completed after local land use and CEQA approvals.
- Following the design, engineering, local land use and CEQA approvals, all jurisdictions require a building permit, another process that can consume months in its approval. After acquiring a building permit, contractors will need time to implement a construction schedule, which may need to account for seasonal considerations (i.e. grading during winter months is infeasible on

many projects); this process may add months to the ability of an operator to have required improvements in place for compliance with this rule.

- Dependent upon the cost of compliance measures – which may be several million dollars to construct new buildings or major improvements to existing structures, an operator may need to secure approval from their local jurisdiction(s) and/or ratepayers for rate increases, in order to maintain reasonable profitability or balance budgets. While there are typically "change of law" clauses in contracts for private operators, which can enable them to pass through these costs, the local jurisdiction may endure a public process, required under Proposition 218, in order to garner approval of their local citizens.

Approvals from other local and state agencies will also likely be required. State Water Resources Control Board (and Regional Water Quality Control Boards) requires composting operations to seek coverage under the Industrial General Storm Water Permit, in addition to Waste Discharge Requirements, for the protection of surface and ground water; permitting documentation for these measures will likely need to be revised where new structures are required.

The rule will cause unforeseen and undue economic impacts on a large number of the regulated facilities.

In addition to the direct costs of implementing this rule (structures and/or building improvements, labor costs for operational changes, monitoring and recordkeeping, laboratory testing and equipment expenses, etc.) the economic analysis should also consider the indirect costs associated with the modifications to existing permitting that will be required. Some analysis of the expected cost impacts on operations should also consider that many facilities lack adequate revenue to implement requirements; the expectation that a composting facility that handles 3,500 tons per year could afford to install an aerated static pile system and meet other proposed measures is ill-founded. In many cases, the estimated $40,000 – 60,000 cost of source testing is beyond the financial means of operators.

This rule will impede the achievement of SB 1383 and other organics diversion policies by reducing capacity in the District.

During the rulemaking process, the District has expressed its support for diverting organics from landfills in the interest of reducing methane and the impacts it has on climate change. Disturbingly, the District is not realistic in its assessment of the negative impact on the organic materials processing infrastructure this proposed rule will have, although a thoughtful, realistic study of economic considerations (still yet to be developed and distributed) may bear this out. Meeting the organics diversion mandates of SB 1383 (and other regulations) will require a significant increase in regional and statewide capacity for organics diversion processing (i.e. composting, anaerobic digestion and other facilities), estimated to be 12-15 new facilities in District staff reports. The proposed rule will make it more difficult to operate existing facilities, let alone site, finance, permit, and operate the new facilities needed to support the materials flows required to meet the State's goal to divert 75% of organics by 2025.

This rule will increase the transportation impacts of organic materials handling both within and outside the District.

If enforced in its current form, the rule will not only stifle the development of future organics diversion facilities, but will lead to a number of facility closures within the District, meaning organic materials will need to be increasingly transported to distant facilities outside its jurisdiction. The District has indicated

an environmental review of this proposed rule will occur, under CEQA guidelines. In its consideration of potential outcomes of this rule, the analysis must include an evaluation of the emissions (and other environmental) impacts on communities both inside and outside the district caused by leakage of organic materials due to the inadequate processing capacity, which will inevitably result.

Comments on Draft Rule Language

Within the Rule 13-2 language there are a number of areas where additional clarity is needed. Because of the ambitious nature of this rule to include solid waste transfer and processing operations with composting operations determining which measures are applicable to each operation is difficult to discern.

The District has not been transparent in the development of this rule or provided adequate explanation of the nexus between emissions reductions and many of the rule requirements.

The rule contains an overwhelming number of parametric measurements and procedures for nearly every aspect of materials management and composting. The District has not provided information or scientific justification for the extreme amount of effort and expense to be undertaken by operators in pursuit of this monitoring, testing and recordkeeping.

CCC has participated in a number of rulemaking processes and has generally found that the regulatory agencies involved are forthcoming and transparent in providing analysis and validation of their proposed regulations as they relate to the mitigation of potential impacts on the environment under their purview. In the case of San Joaquin Valley Air Pollution Control District, substantial study work was conducted – over several years and at significant cost – to analyze emissions rates and potential technological solutions in the development of Rule 4566. Since the rule adoption, in 2011, only one new facility has been permitted.

In the case of this rulemaking, the District has placed limits on temperature, pile dimensions, VOC minimization methods, methane emissions minimization, and other requirements for which no analysis has been provided to stakeholders, and for which it is unclear to many consultants and academics (who are experienced with compost manufacturing processes) how they will have any bearing on the emissions of VOC or methane at the facilities in question. In fact, many of the measures in this rule are unprecedented, having not been introduced anywhere in the world.

Definitions

The definitions are unclear in some areas and lack harmony with Title 14 in a number of ways, which make them more difficult to interpret. While we understand the intent of the regulation is to limit emissions, the descriptions listed under some categories may be inconsistent with, or have little impact on attaining that goal.

Active Phase Composting (13-2-201) *– The phase of the composting process that begins when organic materials are piled together and continues until the material has been composted for either a minimum of 22 days if using an aeration system or a minimum of 30 days if organic materials are placed into windrows, and one of the following conditions is met:*

201.1 The organic material emits no more than seven (7) milligrams carbon dioxide per gram of organic material (CO2-C) per day;

Please explain the scientific basis of the proposed definition and reason for allowing less than half the emissions (7 mg per gram vs. 15 mg per gram) as the CalRecycle compostable materials handling standards which state:

Title 14 California Code of Regulation (CCR), Section 17852

(1) "Active Compost" means compost feedstock that is in the process of being rapidly decomposed and is unstable. Active compost is generating temperatures of at least 50 degrees Celsius (122 degrees Fahrenheit) during decomposition; or is releasing carbon dioxide at a rate of at least 15 milligrams per gram of compost per day, or the equivalent of oxygen uptake.

Food Material (13-2-221) – this definition would be more accurate if it also included packaging and/or food service containers in its description, as those materials are present in a large number of food scrap collection programs and are composted at a number of facilities. Excluding the packaging materials makes it appear as if they are not allowed in collection programs.

Organic Material (13-2-228) – this definition includes wood material. It is unclear if this means woody materials from tree and shrub trimmings or if it includes wood derived from dimensional lumber. We have not seen evidence that wood derived from lumber is a significant contributor to VOC or methane emissions. Please provide additional information on the type of wood defined in this section and the basis for concern over potential emissions from the material.

Standards

Organic Material Handling Operations Requirements (13-2-301) – Please provide an explanation for the 10,000 ton per year (TPY) threshold for enclosure. Facilities of this size – typically accepting ~38.5 tons per day (or about six commercial truckloads of organic material) – are comparatively very small and will likely not generate the requisite revenues to maintain compliance with this rule. Title 14 permitting tiers – which allow facilities up to 100 tons per day under a lower threshold, due to their limited potential environmental impacts would appear to offer a more reasonable approach, if justified by emissions data for organic material storage of less than two days.

Temperature (13-2-302.4) – The temperature of received materials is often beyond the control of the operator, particularly at MRFs or Transfer Stations. Loads of materials during summer months in hotter climates may be in exceedance of the proposed 122^{o}F limit. Is it the District's intention to issue violations for loads that may arrive at the facility in exceedance of proposed temperature limits?

Pile Dimensions (13-2-302.5) – The pile dimensions noted will present significant problems for some MRF and Transfer Station operations, particularly where floor space is limited, leading to operational inefficiencies and causing organic materials to be retained onsite longer than they would otherwise, with equipment and manpower being forced to focus on creating multiple small piles instead of processing and handling activities, which would enable quicker throughput. Reduced design capacity and operational efficiency at regulated facilities may impact compliance with solid waste facility permit conditions and/or require permit modifications or revisions.

Does the District have some undisclosed reasoning behind the pile size limits for materials that are typically at MRF and Transfer Station facilities for less than one day, and are required to be removed within 48 hours? If these storage operations have proposed requirements to be located in a building,

which requires full enclosure and 80% control of VOC and methane emissions, what is the justification for such small piles?

Many aerated static pile (ASP) composting operations utilize a "mass bed" approach, enabling increased space efficiency, which limits construction cost impacts. In numerous cases, the piles may be over 100 feet in the shortest dimension. If the materials are properly aerated and utilizing appropriate emissions abatement methods, what evidence can the District provide that indicate the emissions from these "mass bed" facilities is higher than those with smaller pile dimensions?

VOC Emissions Minimization Methods (13-2-303.3) – The tiered tonnage levels for compliance with proposed abatement methods listed in this section (Moisture Content, Biofilter, and Positive Aeration) are so low that nearly every facility will require Positive Aeration, and permitting tiers are extremely compressed – the difference between 2,000 TPY (~7.7 tons per day (on a 5 day/week receiving schedule, or less than half of one transfer truckload) and 3,500 TPY (~13.5 tons per day, still less than a full transfer truckload)) – that the difference in the tiers is virtually meaningless. When we contrast the requirements in this rule with those from San Joaquin APCD's Rule 4566 – Moisture Content method up to 200,000 TPY, Biofilter method up to 750,000 TPY, and Positive Aeration over 750,000 TPY – we need to question how BAAQMD can justify drastic costs of compliance for such small facilities, given BAAQMD is not in Extreme Non-attainment for ozone limits like San Joaquin APCD's jurisdiction and SJVAPCD based their measures on a reasonable assessment of economic impact.

Methane Emissions Minimization Methods (13-2-303.4) – The parameters set in this rule are another example of regulatory requirements which do not reflect the actual operating conditions in a typical active composting pile. It is highly unlikely – given optimum feedstock mixtures, moisture conditions, and aeration rates – that an operator will be able to keep temperatures at or below 165^{o}F during the first week of composting, and perhaps for some days after. Typical aerated static pile operations regularly observe temperatures of 175^{o}F and above at peak during the initial phase of active composting, with fully robust biological activity and practically zero risk of fire. Please provide justification for this measure.

Please provide some background data on oxygen content within typical active composting piles; 16% is a very aggressive target which will not be achievable for many facilities; 14% is a more reasonable target for compliance. Additionally, language requiring all active composting piles to maintain targeted oxygen content (similar to moisture content requirements of 50%) needs to be improved so as to not have compliance nightmares for operators. Throughout the compost piles there are typically pockets of denser material within which moisture and oxygen will not penetrate as easily as those areas with lower density; both water and air flow through channels within the pile and will not disperse uniformly. It is likely that there could be measurements in specific locations which will not meet the absolute standards proposed in this section. Allowing for an averaging method across the pile will enhance operators' ability to achieve results needed for compliance.

Curing Phase Composting Requirements (13-2-304) – The pile dimensions will not be suitable for operations that employ a "mass bed" type of composting system, where piles may be 100 feet at their shortest dimension, which are designed to provide optimum aeration across the entire pile. These "mass bed" systems allow for a more efficient use of space, limiting the capital costs for construction and reducing the water quality impacts of a system with a larger footprint.

Unaerated windrows are typically sized by the type of windrow turner utilized by the operator. It does not seem reasonable to require operators to replace existing turning equipment to meet smaller pile sizes. These small pile sizes do not appear to be justified for materials that are typically only 10% or less of the total facility VOC emissions. Please provide justification for this measure.

Temperature limits proposed for curing phase stockpiles are not reasonable. Even composting materials which will meet the stability measures indicated for the required Solvita Maturity Index determination, can be above 122^{o}F for days or weeks. Given the limited emissions risk that these materials represent – it is well-documented that 90% or more of the VOC emissions are exhausted during initial storage and active composting – it makes little sense to set artificial barriers to moving materials out of active phase composting. The lag period for holding the curing composting materials in active composting will present challenges to maintaining the required bulk density and oxygen content as the piles continue to densify throughout the composting process, losing pore space and limiting airflow.

Composting Staff Certification Requirement (13-2-305) – CCC is in favor of operators maintaining qualified staff at their facilities. Requiring that the level of qualification be a Certified Composting Operations Manager (CCOM) **for all facilities of 500 tons or more per year** is excessive. We recommend raising the limit to 5,000 tons or more per year and allowing for other certifications. Perhaps requiring training certification for facilities at 12,500 cubic yards onsite, or 50,000 cubic yards annually (approximately 20,000 tons per year) would be more reasonable.

There are a number of other certification programs offered (i.e. by Solid Waste Association of North America) or even attendance at the US Composting Council's Compost Operator Training Course, which may be more appropriate, or even the allowance for operational experience as a substitute, where the operator has demonstrated a history of compliance with existing regulations.

Conclusion

CCC looks forward to continued participation in this rulemaking process. We are hopeful the district will assemble a panel of technical experts who can provide important background on realistic operating parameters of existing compost manufacturing processes, which will better inform this rule and make it more reasonably achievable. We urge the District to provide background information to justify many of the parametric limits contained within current draft language; generally, we do not believe the district has been transparent in setting of these parameters, indicating that there is a significant gap in staff understanding of real-world operating conditions in a variety of composting systems.

We are expecting that the District will also engage with stakeholders in their analysis of economic considerations and set standards which preserve a level playing field with current permittees, but are also commensurate with level of threat posed. Current draft language will certainly be prohibitory to the development of future composting facility capacity and will cause closure of a number of current operations.

The merging of two rule concepts – one for organic materials handling and one for composting operations – has created an unnecessarily complex framework which is confusing to stakeholders and has left a number of questions about what standards are to be applied at which operations. All of the past District communications regarding the expected rulemaking in the solid waste sector were logically clear that there would be separate rules for composting operations and other organic waste handling operations. We believe it would be beneficial for the industry and the District to adhere to the previous plan to keep separate rules.

Throughout this rulemaking process – from the convening of a Methane Expert Panel to the current Workshop Report (dated May 2019) – the District has indicated it has an interest in reducing methane emissions at landfills by removing organic materials, where their anaerobic degradation represents over half of the methane emissions inventory in the Bay Area. Unfortunately, with this draft rule, as written, the District will force an increase in mobile source emissions from the 35,000 to 45,000 (or more) annual truckloads of organic materials being delivered to alternative organic materials processing operations outside the District, as the cost of implementation for this rule will be an inability to build or operate these needed facilities in the Bay Area.

Sincerely,

Neil S.R. Edgar
Executive Director