

**Agromin
Aquinaga Green
Alameda County Waste Management Authority and
Alameda County Source Reduction and Recycling Board
operating as one Public Agency – StopWaste.org
Association of Compost Producers
Athens Services
American Organics
Burrtec Waste Industries
California Bio-Mass
California Compost Coalition
Californians Against Waste
City of Bakersfield Solid Waste Division
Community Recycling and Resource Recovery
CR&R Incorporated
Harvest Power
Integrated Waste Management Consulting, LLC
Recology**

February 23, 2011

Mr. Tracy Goss
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Comments on PAR 1133.1 and PR 1133.3

Dear Mr. Goss:

The companies and organizations listed above are an informal coalition that operates or represent operators of permitted chipping & grinding facilities, landfills, and/or composting facilities within the South Coast Air Quality Management District (District). Given the precedent-setting nature of this rulemaking effort, other statewide stakeholders are also signatories to this letter. On behalf of these companies and organizations we respectfully submit the following comments on the January 25, 2011 drafts of Proposed Amended Rule 1133.1 (PAR 1133.1) and Proposed Rule 1133.3 (PR 1133.3).

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We appreciate the opportunity to comment on the proposed Rules as well as the efforts District staff have taken to involve stakeholders throughout the Rule development process. Unfortunately there are significant problems with both PAR 1133.1 and PR 1133.3 and we cannot support moving forward with the Rules without substantial changes. In addition we question the ability of the District to move forward with the rule development process without providing substantial evidence, which can only be substantiated by additional research. At this point we do not believe there is a clear path to realistically, scientifically, and prudently meet the proposed rule development schedule put forth during the recent February 9, 2010 hearing.

We have provided details of our major concerns below, followed by specific comments on each of the draft rules. We are committed to working with the District to create rules which balance the need for clean air with the need to maintain a viable chipping & grinding and composting infrastructure which is vital to the success of California's statewide, regional, and local recycling, diversion, climate change, and sustainability goals and objectives.

I. Inappropriate focus on composting not processing. As stated during the February 9th Hearing (and during prior Working Group meetings), the fundamental problem with the Rule(s) is that the focus is on the minor contribution of Volatile Organic Compounds (VOCs) from green material which is being *composted* versus the vast majority of VOCs resulting from green materials being managed in the District which is not composted.

Based on the District's estimate, approximately 700,000 tons of green materials are composted annually by 16 composting facilities. These 16 facilities are being asked to shoulder the entire quantified burden of VOC reduction under the draft Rules. While we are encouraged that the District is re-surveying the compost operators to get an accurate picture of volumes composted, it is likely that the total volume of green material composted is significantly less than 700,000 tons. Thus the inequity of burdening the operators that compost green material with the majority of VOC reductions is even greater. The District estimates almost 18 million tons of green material is processed (but not composted) by an additional 94 facilities. It is unclear from the Draft Staff Report whether this number represents total green material processed or if it includes other solid waste processed by these facilities. We believe there are serious flaws with the District's analysis (see below). The ratio of green material *processed* in the District to that which is *composted* is a significant indicator of the inequity of the proposed Rule(s) will have on this vital industry. Putting the bulk of the compliance burden on the few composting facilities is unfair, unreasonable, and is not sustainable. Compost operators in the District are already at a significant economic disadvantage due to the prevalence of the use of green material as landfill Alternative Daily Cover at landfills in the District. **All of the**

research conducted to date on VOC emissions from green material clearly shows that VOCs peak immediately after grinding, trailing off over time.

2. Inaccurate Baseline Inventory. The estimate of the green material processed in the District was presented in the Draft Staff Report as almost 18 million tons (Draft Staff Report, page 18). We understand that District staff utilized the Solid Waste Information System (SWIS) database maintained by CalRecycle to generate this estimate. We recommend that District staff work closely with CalRecycle and the Local Enforcement Agencies (LEAs) of the affected counties to create an accurate inventory. Why did the District staff did not use the information that has been generated by compliance with Rule 1133.1, which requires chipping & grinding facilities to maintain “records of...type and amount of green waste received and, of amount of green waste removed from the site and location they are transferred to.”?

The Draft Staff Report erroneously reports the amount of green material processed within the District. We contend that the actual inventory which represents the amount of green material processed, but not composted, is ten times the amount that is composted. We base our estimate on the State of California Report conducted by CalRecycle (“*Third Assessment of California’s Compost and Mulch-Producing Infrastructure – Management Practices and Market Conditions*”, August 2010 available here: <http://www.calrecycle.ca.gov/Publications/default.asp?pubid=1358>). This report estimated the total volume of material processed within a defined “Southern District” (defined as all of Imperial, Inyo, Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties.). The CalRecycle report offers in Figure 9 a list of the total amount of products made by facilities (both composters and processors) by region. The CalRecycle Report estimates 670,666 tons of compost is produced and 5,291,300 tons of non-composted products are made within the “Southern District”. The non-composted products include Alternative Daily Cover, Mulch, Fuel, Beneficial Reuse at Landfills, and “other”. While the boundaries of the study area (the Southern District) may overstate the total somewhat (because the study’s region is larger than the District) it is likely that the ratio that is represented between composted and non composted is consistent and is applicable to understanding the Rule(s) development implications. We have included a color chart that was developed using data from the CalRecycle report which highlights this ratio (attached). Clearly, a significantly larger volume of green material managed in the District is not composted. The District, when developing strategies to reduce VOCs from green material, must look at the largest source of VOCs from this material if it realistically expects to have an impact rather than further burdening the smaller subset of the source: composting.

3. Need to Survey Green Material Processing Industry. The District has conducted several surveys of green material composters. We support these past and ongoing efforts. However it is our observation that through the various surveys conducted by the District, the District continues to miss the bulk of the green material managed within the District. Although it is not known specifically, it is likely that there is as much as ten times the amount of green material managed in the District that is NOT composted. We request, as part of the rule development process, the District to look at the entire universe of green material and not focus exclusively on green material which is composted. Given that many (if not all) green material processors should be collecting this information under the existing provisions of Rule 1133.1, this should not be a particularly difficult request to fill. We ask that District staff either utilize the data that is required to be collected under Rule 1133.1, or conduct a comprehensive survey of non-composted green material handled in the District.

4. Composting is a Treatment Process. Research by Dr. Fatih Buyuksonmez at San Diego State University ("*Biogenic Emissions from Green Waste and Comparison to the Emissions Resulting from Composting Part II: Volatile Organic Compounds (VOCs)*" 2007), (attached) shows that treating green material by composting reduces VOCs by an estimated 60 to 90 percent over uncontrolled (i.e., non-composted) green material. Although we are not aware of any specific (i.e., per ton) emission factors for processed (not composted) green material, the research on VOCs from composting green material clearly shows that the peak emissions occur shortly after grinding (Please refer to the graphs in Appendix IV of the Draft Staff Report). Given the VOC emissions factors attributable to the feedstock stockpiles in the emissions study work cited in the staff report, green material is a significant VOC source outside of active composting. There are a number of possible mitigations which may reduce VOCs from processed green material and we look forward to evaluating these with the District. However, based on the work done by Dr. Buyuksonmez the most significant (and proven) mitigations would be to ensure that processed green material is sent to a permitted composting facility and we strongly recommend the District take these study results into consideration while developing its Rules.

Specific Comments

PAR 1133.1 CHIPPING & GRINDING ACTIVITIES

5. (c) Definitions (15) Static Pile

The definition of "Static Pile" within PAR 1133.1 is problematic. This definition (and its application) has no place in PAR 1133.1. If a pile of green material achieves a temperature above

122° F it meets the definition of “Active Compost” under Title 14 (Title 14, Chapter 3.1, Article I, Section 17852 (1)). Any green material achieving these temperatures at a facility will require a composting permit and thus be considered a composting facility to be regulated under PR 1133.3.

6. (d) Requirements (1) Holding times

This section describes different holding times for defined materials: 3 days for curbside, 7 days for mixed, and 14 days for non-curbside. We do not believe these holding times are based on any research and they also conflict with holding times required by Title 14. Please provide documentation or research results that support the use of these holding times. Most permitted green material processors are allowed no more than 48 hours as a holding time for unprocessed and processed materials. We ask the District to work with CalRecycle and the relevant LEAs to review this issue to avoid conflicting requirements. The fact that many of these materials are commingled at receiving areas can make it very difficult to enforce the composition (i.e., curbside versus mixed or non-curbside) of green material.

7. (d)(1)(A) Food waste

Stand alone chipping and grinding facilities (those not co-located at MRFs, Transfer Stations, and/or landfills) are not allowed to handle source-separated food scraps without additional permitting. The requirements in PAR 1133.1 need to be consistent with and at a minimum not contradict the existing requirements for these types of facilities under Title 14.

8. (d)(1)(B, C, D, &E)(i)

We believe that the term “used on site” needs to be better defined. Significant VOC emission generation begins at the grinding process. How material is handled immediately after grinding can have a significant impact on VOC generation. We have provided one published, peer reviewed study (Buyuksonmez, 2007), which shows that after grinding, composting reduces VOCs 60 to 90 percent versus not composting. Given these results, spreading processed green material over a slope (as is common practice when using green material as Alternative Daily Cover) may be the most effective way to release VOCs from processed green material. Processed green material used as Alternative Daily Cover is one the largest use of processed green material within the District; it would seem reasonable that the District conduct research as to the VOC emissions from this practice. Similarly “used on site” should be clearly defined to mean “utilized on site” and not “stockpiled”. Many green material processors send processed green material for direct land application in agriculture. If this rule is to reduce VOC emissions, the District should regulate how the material is handled once it arrives at its destination within the District.

9. (d)(1)(E)(ii)

This section would require a processor to become a permitted composter. What is the basis for 14 days? Is this the peak VOC period? If so shouldn't composters also only have to manage their piles for the first 14 days? This approach would also appear to conflict with PR 1133.3, which does not allow passive pile or static pile composting. We do not support the District Rule(s) which limit or restrict the use of static pile composting as their use may significantly reduce VOC emissions over turned windrow composting.

10. (d)(2) “Operator of a chipping and grinding activity at a facility that produces finished compost”.

This section should be deleted and moved to PR 1133.3. All green material composters are also chippers & grinders. Chippers and grinders cannot be composters without obtaining the appropriate permit from the LEA and/or CalRecycle. Holding times for composters should be listed in 1133.3 for ease of understanding.

11. (d)(2)(F) “Chipped...may be stockpiled if not integrated for composting”.

Again, this would be considered composting under Title 14 and thus should not be in PAR 1133.1.

12. (d)(4)

It is unclear what the basis for a wet weather exclusion would be? Chipping and grinding can be and is conducted during rainy periods.

PR 1133.3 EMISSION REDUCTIONS FROM GREEN WASTE COMPOSTING OPERATIONS

13. Cost Effectiveness of Mitigation Measures

We believe the SCAQMD has severely underestimated the cost of applying the so called “compost cap”. While we believe that the compost cap does have some potential to reduce VOCs, the requirement to cap each windrow every time it is turned makes the mitigation measure unworkable. The originator of the compost cap (Dr. Buyuksonmez) never intended the cap to be replaced after every turn, but rather, during the CalRecycle Modesto Study, the cap was placed twice. In addition, the District needs to understand the consequence of applying the compost cap on other emissions from a facility. By requiring the compost cap, the District Rule will necessitate the multiple handling of the same material. This will require an operator to emit more criteria pollutants from mobile sources. This practice could also have significant greenhouse gas impacts from the increased use of diesel fuel. These potential impacts, given

statewide climate change initiatives cannot be underestimated or ignored, thus necessitating a thorough review prior to Rule adoption.

14. (d)(A) Passive Pile Composting

There is no basis for the exclusion of “passive pile” composting (which is more commonly referred to as “static pile”). Current research shows that VOC emission releases peak after each turning event. Static pile composting (which has limited turning) would not include these releases and may in fact have lower VOC emissions overall. Unless the District can provide research that shows that passive pile composting (not stockpiling) has larger uncontrolled emissions than windrows, passive pile or static pile composting should be allowable under PR 1133.3.

15. (d)(B)

Given our comment above, this section should be removed.

16. (d)(C)

As mentioned in comment #6, PR 1133.3 should not refer back to requirements in PAR 1133.1. If there are required holding times for composting facilities, they can be listed in PR 1133.3.

17. (d)(F)

While oxygen is a reasonable parameter for composting operations to use as a monitoring tool, we are not aware of a link between maintaining an oxygen level of 5% and reducing VOCs. Please provide evidence documenting the correlation between oxygen saturation and VOC emissions. No research supports this expensive and time-consuming requirement that we are familiar with. If substantial evidence for this correlation cannot be marshaled, we respectfully request that the oxygen monitoring requirement be stricken from the Rule.

18. (d)(G)

Given the previous comment (#17), the oxygen concentration portion of this section should be removed. The Rule should also allow flexibility in how moisture is measured. There are other field tools which are far more accurate than moisture meters. Given that the District is looking for a relative reading, other tools [such as “the squeeze test”, or using a Koster Moisture Tester (<http://www.kostercroptester.net/aboutus.html>)] should be allowed methods of measuring moisture without separate APCO approval. We have provided information on “the squeeze test” in attached documents.

19. (d)(1)(i) Surface Water Application.

What is the basis for the 10,000 ton per year cut off under this section of the Rule? A similar mitigation is being proposed in the SJVAPCD and the threshold is much greater (reportedly 150,000 tpy). We support the surface water application as a mitigation, but are concerned that the basis for the threshold being applied here is inappropriate. Please explain.

20. (d)(1)(ii) "Compost Cap"

Significant questions were raised about the cost-effectiveness of the use of the "compost cap" as a VOC mitigation being proposed by the District's Rule. The City of Bakersfield has submitted an analysis of the compost cap that highlights the difficulties with this mitigation. We suggest the compost cap be removed from this Rule until such time as the District can demonstrate its cost-effectiveness as a mitigation and that its use will not have an additive emission impact in other criteria pollutants such as particulate, GHG, and/or Nox. While the compost cap (as envisioned in the Modesto Study) may have some application for VOC mitigation, the consequences of its use are not fully understood and more research/investigation is needed. As it is being proposed in Rule 1133.3 it is not practical.

21. (2)(B) Forced aeration

The requirement of an 80 percent overall system control efficiency for VOCs and Ammonia seems high given the lack of operational data on the performance of ASP and biofilter systems for green material with more than 10 percent food scraps. Please provide more evidence that this is achievable in commercial application on the proposed regulated feedstocks (i.e., not biosolids).

22. (2)(G) Source Test

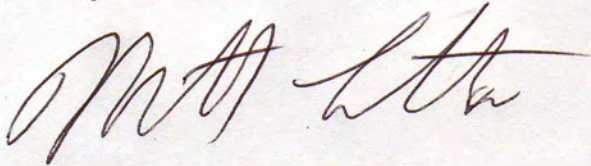
The current methodology for source testing is very expensive and is not warranted for ASP biofilters. Best management practices are available for biofilter construction and operation. Typical VOC source testing costs between \$50,000 - \$100,000 per test. Therefore, testing at the initial construction of the biofilter in addition to every two years, as articulated in the draft Rule, is cost prohibitive. If an operator is adhering to best management practices as required in section (2) (H), and the equipment installation, maintenance and best management practices are documented, the testing will be redundant. We believe the District is transferring the burden of developing evidence for this mitigation measure to the regulated community by this requirement versus relying on its own resources for understanding it prior to adoption of the Rule.

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Our recommendation is that the SCAQMD conduct a test with a portable flux chamber on the surface of the biofilter within three months of the start of operations. If at that time, or at any other time the District tests with a portable flux chamber, the TNM NEHC ppmv (total non-methane non-ethane hydrocarbons; parts per million volume) is over 100 ppm, a source test will be required. The portable flux chamber test can be required if nuisance complaints demonstrate obvious neglect or negligence by not adhering to best management practices.

We look forward to discussing these comments with you at your convenience. If we can provide any clarification on our comments, please don't hesitate to call.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Matthew Cotton', is written over a light-colored background.

Matthew Cotton
Integrated Waste Management Consulting, LLC
on behalf of the entities listed above.

Attachments

1. *Biogenic Emissions from Green Waste and Comparison to the Emissions Resulting from Composting Part II: Volatile Organic Compounds (VOCs)* Buyuksonmez, 2007
2. "End Uses in the Southern Region" Chart created from CalRecycle Infrastructure Report.
3. Hand Squeeze Quick Test for Pile Moisture, USCC Handout.