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COMPOST  
PRODUCERS**  
*"We Build Healthy Soil"*



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December 5, 2014

Mr. Ken Decio  
Senior Integrated Waste Management Specialist  
Department of Resources Recycling and Recovery  
PO Box 4025  
Sacramento, CA 95812-4025

Dear Mr. Decio:

**Re. CalRecycle Regulatory Revisions to Title 14 and 27 Regarding Compostable  
Materials Handling and Transfer/Processing**

The Association of Compost Producers (ACP) is pleased to offer this letter to make comments and recommendations on CalRecycle's revisions to the Title 14 and 27 Compostable Materials Handling and Transfer/Processing Regulations.

ACP is a non-profit association of public and private organizations representing the vast majority of compost producers in the state. We are dedicated to increasing the quality, value and amount of compost being used in California. We do this by promoting activities and regulations that build healthy soil, benefiting people and the environment. ACP is also the California State Chapter of the U.S. Composting Council. We are largely supportive of the revisions and view them as a positive step forward to assist better preparing the state to manage a significant increase in organics diversion to meet California's 75% Recycling Goal. ACP members are leaders in the California compost industry and work together to increase compost markets and improve compost product and manufacturing standards. The association provides education and communication on compost benefits and proper use through support of scientific research and legislation aligned with developing and expanding quality compost markets.

## **GENERAL COMMENTS**

Over the past three years, ACP has worked with CalRecycle staff to understand how we can improve organics regulations while at the same time continuing to build a robust compost industry in California. In previous letters and discussions with CalRecycle staff on this issue, starting in October 2012, we stated our substantial agreement with a majority of the regulatory language changes which have made it into the regulatory revisions. For example, including permitted maximum tonnage requirements, on-site storage limits, maximum metals concentrations, small-scale composting exclusions, etc. These will help to clarify a number of issues surrounding the compost industry processing and marketing of recycled organic material. We are pleased that CalRecycle is now revising these titles to correct existing ambiguities in a manner that facilitates the current transformation in organics management in the State of California, to help contribute greatly to the California's 75% Recycling goal by 2020.

To ensure that the revised Title 14 and Title 27 regulations promote a commercially viable organics management industry, ACP offers the following comments.

### **Economic Analysis:**

The economic analysis that was completed as part of the Initial Statement of Reasons (ISOR), Appendix B1, did not adequately address the possible economic impacts of the proposed rule change to the compost industry. We believe that a more broad-based and in-depth economic analysis is necessary to assess the full range of potential economic impacts to our industry. Moreover, if we were to assume that the high end of the economic impact were valid at \$53 million per year, this represents an untenable impact to the compost industry that could not be readily absorbed given the current market conditions for the industry.

### **Enforcement:**

We are concerned that overall the proposed rule change does not adequately address enforcement. While regulations on their own tend to level the playing field for all players, unequal and inconsistent enforcement creates potential inequities. Are the LEAs currently able to enforce 1% contamination standards? If not, how can we expect them to enforce any more stringent and complicated standards, as proposed? This needs to be addressed at the global level so that all players subject to these rule changes are enforced equally under the law.

### **Physical Contamination Limits:**

One of the main contested topics remains the proposed 0.1% Physical Contamination Limit (PCL). While our membership struggles to reach a consensus on an appropriate PCL, the fundamental question remains as to what is the scientific or operational basis of this limit. We believe that the proposed PCL is arbitrary and not based on substantial existing compost operations in the State. Nor does the economic analysis that was completed as part of the ISOR adequately address the economic impact of a 0.1% PCL. Because of this lack of data, we believe that more research is warranted before a PCL number can be justifiably proposed.

We further believe that it is unreasonable to propose an almost instantaneous compliance timeline with such a low PCL. If any aggressive PCL is to be achieved without unreasonable

economic impacts, it will require phasing in over time, to allow operators to adjust their operations and invest in the necessary equipment and human capital required to achieve compliance. Since we have an existing timeline mandated by the recent passage of AB 1826 and AB 1594 that roughly wind up to the year 2020, this may be an appropriate timeline to phase in new, well researched PCLs. Without such a phased and researched approach, the proposed 0.1% PCL has the potential to stifle the economic viability of the composting industry at a time when the State is requiring the very same industry to become a very large part of its waste diversion goals.

ACP is supportive of a collaborative approach to achieving lower PCLs for compost. As such we advocate the formation of a collaborative working group that would meet regularly to support CalRecycle's leadership in developing higher physical contamination standards that could be phased-in as part of the proposed regulatory framework. We propose this working group to be comprised of representatives from the composting and waste management industry, experts in the academic and scientific community, and members of the regulatory community (including air, water (SWRCB), solid resources and CDFA). In addition, it should include representatives from the main affected industry, i.e. agriculture and horticulture growers and ag commissioners, who use most of this material for environmentally beneficial purposes. We see this "California Compost Standards Working Group" as a working committee that would advise CalRecycle in the phasing and implementation of more stringent standards that are both scientifically based and economically feasible. This working group would be able to advise CalRecycle on expanded industry economic impact analysis, development of effective, standardized testing methods, and similar topics related to compost standards, with the common goal of achieving workable Compost standards in general.

The California Compost Standards Working Group could also advise CalRecycle on other areas of the proposed rule changes and provisions should be made within the regulatory framework that would allow modifications to Title 14 and 27 based on the recommendations of the group.

Until such a time that a collaborative working group can establish the scientific and economic justification for lower physical contamination standards, ACP advocates a PCL of 1.0% by weight. We believe that any arbitrary timeline to ratchet down the contamination limit in the absence of substantive research, industry input, and data leaves our industry vulnerable to undue duress.

The following are specific justifications for not pursuing the proposed 0.1 % PCL at this time:

- 0.5% is the existing detection limit for most compost labs. The current "industry standard," USCC - TMECC testing protocol has a 0.5% detection limit.
- Material recovery on the front end for 0.1% would be cost prohibitive.
- Screening on the back end, down to 4 mm, to achieve 0.1% would eliminate too much valuable compost in "overs," if this size limit were imposed on all compost produced. These trashy overs would likely find their way to landfills affecting California's 75% goals.
- Caltrans has adopted 0.5% as their specification for State highway landscape application, which is the current testing limit, but was not based on if this is workable in all market-based applications, as it is new this year, and we have little experience with it to date.

- The true economic impact of a 0.1% PCL has not been adequately addressed in the economic analysis that was prepared as part of the Initial Statement of Reason because there are few, if any, operators in the state that are presently operating at this PCL threshold.

Sampling and Testing Protocols:

As discussed above, there are no existing laboratory standards or protocols that both collect statistically reproducible samples, as well as test, for physical contamination below 0.5 percent. We advocate CalRecycle's support of updates to the USCC - TMECC and the requirement of use of labs that are in the U.S. Composting Council's "Seal of Testing Assurance" (STA) program "approved list" in the "Compost Analysis Proficiency Program." The TMECC is currently under review by the USCC and we advocate the adoption of new TMECC protocols that can address the proposed sampling, testing, and lower detection limits that are contemplated in several different classes of material as part of these rule changes. Use of STA approved labs could allow the anonymous sharing of testing data back to CalRecycle to gather the necessary basis for modifications to compost and other material limits and standards. Until such an industry standard analytical protocol is modified and tested, changes to physical contamination standards are not warranted.

Chip and Grind Physical and Pathogen Standards:

The requirement that any Chip and Grind material that is land applied meet the pathogen standards that are proposed for composted material is in effect requiring that this material be composted. Allowing the chip and grinders to circumvent composting protocols weakens the protocols suggesting that they are an optional process for reducing pathogens effectively giving the fully permitted composting projects a disadvantage in the marketplace due to the additional cost burdens of legally composting. Was it the intent of the proposed rule change to require the composting of chip and grind material to achieve pathogen reduction standards as well as to address pest mitigation? If so, the net effect of the rule change is to virtually eliminate the chip and grind operator classification, because they would need to compost the material in order to comply. As compost producers we would not be against composting all the material. And while it may address some plant pathogen contamination issues (since composting green material effectively eliminates these pests and pathogens, according to CDFA protocol), this would greatly increase the cost of organics materials management in most jurisdictions. We could include this discussion in the above proposed "California Compost Standards Working Group", to provide for more effective management of the chip & grind material, in concert with finished compost.

Land Application Definition, Physical Contamination:

To reiterate, the proposed 0.1% physical contamination requirement for land application material is presently untenable by our industry. ACP is open to exploring methods and timelines to achieve this standard. But, presently there is too much material that is currently being land applied that would not be able to meet this proposed standard, and the cost to immediately achieve such a standard would pose an unreasonable economic burden. We recommend revising this limit to 1%, then employing the "California Compost Standards Working Group" methodology to the assist CalRecycle in developing methodologies and timelines to determine if

more stringent limits are necessary and then to develop appropriate physical contamination standards for all land applied material.

In Vessel Digestion Facility Pathogen Reduction Standards:

The pathogen reduction standards from section 17868.3 for "Compost" appear to be replicated in the "In-Vessel Digestion Facility" section, 17896.60. In vessel digestion facilities may achieve their own process to further reduce pathogens as part of the digester operations. Additional pathogen reduction such as windrow and/or aerated static pile time and temperature requirements may not be required, provided the material passes the proposed laboratory test for pathogens. Further processing would be a marketing decision. Requiring composting for all digestate material would add a redundant and potentially costly step to the processing of material for certain in-vessel digestion facilities who otherwise meet the pathogen standards and have markets for the "raw" digestate material.

Specific Language Recommendations

We offer specific language for implementing our comments in a separate document, attached, "ACP Title 14-27 Specific Language Recommendations". It is anticipated that further revisions would be incorporated based on the recommendations of the proposed California Compost Standards Working Group.

Conclusion

ACP appreciates the opportunity to comment and provide these recommendations to the proposed rule changes. We believe that CalRecycle's encouragement of industry dialogue -- which is reflected in its willingness to meet with ACP in March and April of this year, as well as its strong participation in the ACP's First Annual California Compost Summit in Sacramento in October - is an essential component of fostering a robust organics management industry in the State of California. We look forward to continued collaboration in addressing the complex issues before us.

Very truly yours,



Jeff Ziegenbein, ACP President,  
Inland Empire Utilities Agency



Dan Noble, Executive Director  
Cell/Text: 619-992-8389  
[danwyldernoble@gmail.com](mailto:danwyldernoble@gmail.com)  
[www.healthysoil.org](http://www.healthysoil.org)

cc: Robert Holmes, Manager, CalRecycle  
Mark De Bie, Deputy Director, CalRecycle  
Caroll Mortensen, Director, CalRecycle

**ACP DRAFT COMMENTS ON TITLE 14 and 27 NOTICE OF RULEMAKING**

Submitted by Association of Compost Producers (ACP)

**SPECIFIC LANGUAGE RECOMMENDATIONS**

**We offer the following specific comments and recommendations for changes to the proposed title revisions:**

**P.8, Line 29:** Digestate Definition. Digestate is a product. Recommend: "Digestate" means the solid and/or liquid *product* remaining after organic material has been processed in an in-vessel digester, as defined in section 17896.2(a)...

**P. 9, Line 53:** Land Application. Physical contamination limit (A) of 0.1% is too onerous. Recommend change to 1% with a phase in to 0.5% or lower, as recommended in general comments.

**P.9, Line 54:** The statement "contaminants greater than 4 millimeters" should not imply that the compostable material should be ground to a size 4 mm or less. We recommend eliminating the particle size limit in these regulatory wording, especially since glass particles less than 4 mm, would not be measured, and we would recommend that they should be. This can be more specifically, and operationally, addressed once the sampling and testing protocols are refined, as recommended in the general comments.

**P. 10, Line 2:** Land Application (A) frequency and depth: we believe the limit of 12 inches and 12 months (presumably on non-agriculturally zoned land) is arbitrary and requires more study. The requirement of EA to explicitly consult with RWQCB to approve alternative application depths and frequency is not necessary; this consultation should be at the EA's discretion.

**p. 10, Line 15:** Verification of Compliance: This is unclear as to the form of verification of compliance- please specify the form of verification.

**P. 10, Line 18:** Physical contamination limit (B) for land applied material of 0.1% is too onerous. Recommend change to 1% with a phase in as recommended in general comments.

**P. 15, Line 57:** Agricultural Material Composting Operations: The proposed change appears to be if operation is limited to Agricultural Material, there is unlimited quantity under a Notification Tier permit. We think "unlimited quantity" should be limited to onsite agricultural operations and material. As written there is no limit on massive scale agricultural composting operations, under a notification tier permit, that could compost agricultural material from both on-site and off-site sources. Recommend change to: "If their feedstock is limited to agricultural material generated from on-site agricultural operations, agricultural material composting operations may handle unlimited quantity of agricultural material on the site from which that the material is generated and may sell or give away any or all compost they produce. If the material is generated off-site and transferred to the compost operation site, then the operation is subject to Article 2, 17854 - Compostable Materials Handling Facility Permit Requirements"

**P. 17, Line 5:** Green Material Composting seasonal variations: We agree that seasonal storage adjustments are warranted for operator flexibility. Recommend extending to 120 days, "The EA may grant one more additional 30-day seasonal storage adjustment not exceeding a total of 120 days per calendar year."

**P. 17, Line 35:** Green Material Composting maximum volumes: mandatory cease and desist too onerous. Recommend change to:

"In addition, the EA *may* issue a cease and desist order pursuant to section 18304 directing, among other things, that the operator immediately cease accepting material at the site until the operator has demonstrated to the EA that it has corrected the violation and eliminated the cause of the violation."

**P. 18, Line 48:** Research Composting Operations: ACP would like to encourage additional research operations to advance the science of composting. Recommend: "If the EA determines based on the report that there are further research objectives to be met or data to be gathered, the EA may extend the research for an additional two years. If the EA determines based on the report that there are no further research objectives to be met or data to be gathered, the operator shall conduct site restoration at the facility pursuant to section 17870, or apply for an EA Notification or other applicable permit for the site."

**P. 20, Line 26:** Odor Impact Minimization Plan: Recommend: Remove "and data collection." This may imply more advanced testing methods than may be necessary. We believe it is reasonable to start with qualitative and then move to quantitative (i.e. lab testing).

**P. 20, Line 52:** Odor impact Minimization Plan: Recommend change back to "May direct." We believe that EA should be given latitude to escalate based on individual site, material and receptor circumstances.

**P. 23, Line 35:** Maximum Metals Concentrations: The apparent proposed requirement to have all sample results received prior to material leaving the site is impractical. Normal lab turnaround times are at least 1 week and more often 2 weeks or more. Most composters will want to test their material in "finished piles" where it is ready to leave the composting site. Elsewhere a sampling frequency of one sample per 5,000 yards is proposed, which is reasonable for heterogeneous feedstocks (e.g. food scraps mixed with green material). This may not be necessary for clean homogeneous feedstocks, like manure and biosolids with clean wood shavings or rice hulls. Recommend change to: "Sample results collected at the frequency prescribed in section 17867.1(a)(1) and must be available for review by EA at the composting site."

**P.25, Line 10:** Physical Contamination Limits: As stated in the general comments above, we believe that the Physical Contamination Limits (PCLs), as proposed, have not been adequately studied to be adopted. We also believe that working toward reasonably more stringent and scientifically justified PCLs would benefit both the composting industry and the general public. We therefore propose that CalRecycle form a new "California Compost Standards Working Group," to assess and advise the agency on PCLs. We recommend that this section be revised accordingly.

***implementation language framework:***

Add to section 17853 Definitions: New Definition (and perhaps new sub-section elsewhere in the code): "California Compost Standards Working Group" is a working committee formed by CalRecycle that is comprised of 5-9 representatives from the composting and waste management industry, experts in the academic and scientific community, and members of the regulatory community. The function of the working group is to advise CalRecycle on the industry perspective of the phasing and implementation of Title 14 and 27 standards that are both scientifically based and economically feasible. The working group will advise CalRecycle on topics including but not limited to expanded industry economic impact analysis, development of effective, standardized testing methods, and recommendations on revisions to Title 14 and 27

***Suggested revision:***

**§ 17868.3.1. Physical Contamination Limits.** (a) Upon adoption, and effective until "Physical Contamination Limit Phase In," Compost shall not contain more than 1% by weight of physical contaminants greater than 4 millimeters. Compost that contains more than 1% by weight of physical contaminants greater than 4 millimeters shall be designated for disposal, additional processing, or other use as approved by local, state or federal agencies having appropriate jurisdiction. Verification of physical contamination limits shall occur at the point where compost is sold and removed from the site, bagged for sale, given away for beneficial use and removed from the site or otherwise beneficially used. Sample results, collected at the minimum frequency prescribed in section 17868.

**§ 17868.3.3. Physical Contamination Limit Phase In (new section).** CalRecycle may adopt new Physical Contamination Limits based on the advice and consensus of the California Compost Standards Working Group. The revised Physical Contamination Limits shall be no more than 1 percent, and no less than 0.1 percent by weight of physical contaminants greater than 4 millimeters. The new Physical Contamination Limits shall be adopted on a timeline as recommended by the working group.

**Note:** this methodology could also be employed throughout the proposed rule changes wherever physical contamination standards are discussed (ie. Physical Contamination for Digestate, P. 47)

**P.27, Line 44:** Digestate definition. Digestate is a valuable soil product, not a waste. Recommend change the definition to: "Digestate means the solid and/or liquid residual *product* remaining after organic material has been processed in an in-vessel digester."

**P.29, Line 11:** Salvaging Definition. This is the same as material recovery. Recommend: Add "(e.g. Material Recovery Facility)."

**P. 30, Line 13:** - In Vessel Regulatory Tiers: Distribution Center In-vessel Digestion Operations is placed in Notification Tier with no volume limit. This seems like an opportunity for large "Distribution Center" food waste AD to be unregulated. Recommend Change: "Small Distribution Center In-Vessel Digestion

Operations (less than 60 yd<sup>3</sup> or 15 tpd)" Distribution center in-vessel digestion operations larger than this should be regulated under "Medium Volume" and "Large Volume" requirements.

**P. 40, Line 9:** Odor Minimization Plan: Recommend change "shall direct" to "may direct"

**P. 41, Line 24:** Scavenging and Salvaging. Recommend: "salvaging of materials, such as metal, paper, glass and cardboard is permitted as an integral part of the operation (e.g. Material Recovery Facility)."

**P. 41, Line 44-51:** Signs: What health and safety purpose does this serve? Recommend: delete and replace:"(a) The EA may require appropriate in-vessel digestion operation or facility signage if it is determined that such signage may promote public health and safety."

**P.42, Line 26:** Training: recommend, "Personnel assigned to the operation or facility shall be adequately trained in subjects pertinent to their job description including solid waste operations..."

**P. 45, Line 12:** Digestate Handling: Digestate is not solid waste, it is a waste derived soil product. Suggest: remove "solid waste" Suggest: "(A) transported to another solid waste facility or operation, or facility that has obtained a Compostable Materials Handling Facility Permit pursuant to section 17854 for disposal, composting, or additional processing; or"

**P. 45, Line 16:** Digestate Handling: Digestate sampling frequency for metals, pathogens, and physical contamination should mirror the compost regulations.(b) should be revised to reflect this sampling/testing standard in section 17896.58 below.

**P.45, Line 28:** Sampling Requirements: Comment: As written this is impractical for in-vessel sites that do not have an attached composting site. Recommend change to: "The sampling of compost and digestate produced at an in-vessel digestion facility (pursuant to section 17896.57(a)(2)) shall occur at the point (1) where the digestate or compost is removed from the site, bagged for sale, given away for beneficial use and removed from the site or otherwise beneficially used, or (2) at the site of final curing, blending, processing or composting at a fully permitted solid waste facility (reference codes). Analytical results indicating compliance with sections 17896.59, 17896.60, and 17896.61 shall be received by the operator within 15 business days of digestate being removed from in-vessel digester. Sample results must be received by the operator prior to removing digestate or compost from the in-vessel digestion facility or final composting site where it was produced."

**P.45, Line 45:** Sampling Requirements: Comment: As with compost sampling protocol, if sampling from a conical pile, it seems like you would be getting too many samples from the top half and none from bottom half. Propose Change: (A) 6 samples from the bottom half of the pile, each at a different cross section and height. (B) 6 samples from the top half of the pile, each at a different cross section and height.

**P.46, Line 2:** Maximum Metal Concentrations. Recommend, "Compost and Digestate"

**P.46, Lines 12 and 13:** Maximum Metal Concentrations. Recommend, "Compost and Digestate"

**P. 46, Line 23:** Pathogen Reduction: Comment: The in vessel digestion process will serve as its own pathogen reduction method. There should not be an additional requirement for pathogen kill as suggested, which appears to be “cut and pasted” from the composting pathogen reduction section above. “Provided that in-vessel digestion operations operate at thermophilic temperatures for 3 days, or mesophilic for 15 days, AND pass the pathogen lab test, no further pathogen reduction is required.”

**P.46, Lines 24 and 26:** Pathogen Reduction: Recommend, “Compost and Digestate”

**P. 46, Line 28:** Pathogen Reduction: Recommend: "Sample results collected at the frequency prescribed in section 17896.58(b)(1) must be received by the operator prior to removing compost or digestate from either the in-vessel digestion facility where it was produced, or at the site of final curing, blending, processing or composting at a fully permitted solid waste facility (reference codes)."

**P. 46, Lines 30 and 31:** Pathogen Reduction: Recommend, “Compost and Digestate”

**P.46, Lines 34:** Pathogen Reduction: Recommend: "Sample results collected at the frequency prescribed in section 17896.58(b)(1) must be received by the operator prior to removing product from the in-vessel digestion facility site, or the site of final curing, blending, processing or composting at a fully permitted solid waste facility (reference codes).

**P.46, Line 36:** Pathogen Reduction: Recommend: “(2) at in-vessel digestion facilities using an enclosed or within-vessel digestion process, active Substrate shall be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of 3 days, or 120 degrees Fahrenheit or higher for a pathogen reduction period of 15 days.

Delete (b) 2(A)

**P.46, Line 42:** Pathogen Reduction: Recommend delete and Replace with: “(3) Provided substrate temperatures in an in-vessel digestion facility are maintained according to minimum standards prescribed in section 17896.60(b)(2) and sample results prescribed in section 17896.60 (b) are within acceptable limits, no further pathogen reduction of digestate processed in this manner or compost produced from this digestate, shall be required.”

**P. 46, Line 46:** Pathogen Reduction: Recommend Delete (b)(4), as this is redundant with the composting regulations.

**P. 47, Line 21 and throughout Section:** Physical Contamination Limits: Recommend change to, “compost and digestate”

**P. 47, Line 22:** Physical Contamination Limits: 0.1% contamination limit is too onerous and arbitrary. Please refer to the general comments on Physical Contamination above and also specific comment for P.25, Line 10.

**P. 47, Line 29:** Physical Contamination Limits: Recommend: change to, ". . . compost process or fully permitted solid waste facilities where final curing, blending, processing or composting occurs (reference codes), shall take one representative sample..."