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Subject: Comments to proposed Title 14 and 27 Rulemaking

Dear Ken,

CR&R Environmental Services (CR&R) is pleased to provide the following comments and recommendations regarding the proposed Title 14 and 27 Rulemaking. This is a critical time for organics management in the State of California. We appreciate CalRecycle's efforts to garner input from all interested stakeholders.

CR&R is poised to play an increasingly important role in organics management in Southern California and is grateful for the trust that CalRecycle has put in our company in awarding the recent Greenhouse Gas Reduction Grant. We do not take this trust lightly, and intend to leverage this grant to its full potential in the second phase of a successful, combined, organics management and greenhouse gas reduction project.

Generally, we are pleased with the depth with which CalRecycle has attempted to take the proposed revisions to the code. We have offered considerable constructive comments in the hope that modifications to the proposed changes will allow the code to both strengthen our mutual goals and allow our industry to continue its role as the key players in executing the states ambitious organic waste diversion goals.

GENERAL COMMENTS

Economic Analysis:

The economic analysis that was completed as part of the Initial Statement of Reasons (ISOR), Appendix B1, does not adequately address the possible economic impacts of the proposed rule change to the compost industry. 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 industry that could not be readily absorbed given the current market conditions for compost.

Enforcement:

The proposed rule change does not adequately address enforcement. 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 industry struggles to reach a consensus on an appropriate PCL, the fundamental question remains as to what is the scientific or operational basis of this proposed limit. We maintain 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, more research is warranted before a PCL number can be justifiably proposed.

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 of the year 2020, this may be an appropriate timeline to phase in new, and more defensible PCLs. Without a phased and researched approach, the proposed 0.1% PCL has the potential to stifle the economic viability of the compost industry at a time when the State is requiring the very same industry to become a very large part of its waste diversion goals.

CR&R 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 (more stringent) 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. 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, CR&R advocates a PCL for compost and digestate of **0.5%** 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 an effective 0.5% detection limit.
- Material recovery on the front end for 0.1% would be cost prohibitive.
- Screening on the back end to achieve 0.1% would eliminate too much valuable compost in “overs.”
- CalTrans has adopted 0.5% as their specification for State highway landscape application.
- 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.

Testing Protocols:

As discussed above, there are no laboratory standards or protocols that test for physical contamination below 0.5 percent. We advocate CalRecycle’s support of updates to the USCC - TMECC or other industry accepted standards and the requirement of use of labs that are in the U.S. Composting Council’s STA program “approved list.” 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, adopting stringent PCLs 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. We believe that only a select group of chip and grind operators that accept only very clean landscaper and tree trimmer wastes would be able to meet the proposed pathogen standards without composting. Was this the intent of the proposed rule change, to require the composing of chip and grind material to achieve pathogen reduction standards? If so, the net effect of the rule change is to virtually eliminate the chip and grind direct to land application market, because nearly all operators would need to compost the material in order to comply.

Land Application Definition, Physical Contamination:

To reiterate, the proposed 0.1% physical contamination requirement for land application material is presently untenable by our industry. CR&R 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 achieve such a standard post haste would pose an unreasonable economic burden. We recommend revising this limit to **1%**, then employing the “California Compost Standards Working Group” methodology to assist CalRecycle in developing methodologies and timelines to achieve more stringent physical contamination standards for 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 will achieve their own process to further reduce pathogens as part of the digester operations. No additional pathogen reduction such as windrow and/or aerated static pile time and temperature requirements should be required, provided the material passes the proposed laboratory test for pathogens. This compost methodology requirement for in-vessel material is redundant and not necessary since pathogen reduction is already achieved in the digester and confirmed in the required pathogen laboratory test. This will 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 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. 10, Line 4: Land Application. Physical contamination limit (A) of 0.1% is too onerous. Recommend change to 1% with a phase in as recommended in general comments.

P. 10, Line 10: 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: CR&R 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), as indicated.

P. 20, Line 52: Odor impact Minimization Plan: Recommend change back to "May direct." We believe that EA should be given latitude to revise (?) 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. 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 more stringent and scientifically justified PCLs would benefit both the composting industry and the general public. We 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 **0.5%** by weight of physical contaminants greater than 4 millimeters. Compost that contains more than **0.5%** 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 17868.3.1(c), must be received by the operator prior to removing compost from the composting operation or facility where it was produced.

(b) Upon request of the EA, a compostable material handling operation shall take a representative sample of compost and send to a laboratory *certified by U.S. Composting Council (USCC) and tested using the most currently adopted TMECC (Test Methods for the Examination of Composting and Compost)*

(c) All compostable material handling facilities shall take one representative sample for every 5,000 cubic-yards of compost and send to a laboratory at which physical contaminants greater than 4 millimeters shall be collected and weighed, and the percentage of physical contaminants determined.

(d) Any sampling conducted to comply with this section shall require a composite sample. A composite sample shall be representative and random, and may be obtained by taking twelve (12) mixed samples as described below.

(1) The twelve samples shall be of equal volume. (2) The twelve samples shall be extracted from within the compost pile as follows: (A) Six samples *from the top half of the pile*, each at a different cross-section; (B) Six samples from the *bottom half of the pile*, each at a different cross-section;

(e) Alternative methods of compliance to meet the requirements of this section may be approved by the EA if the EA determines that the alternative method will ensure the physical contamination limits requirements of this section are met.

(f) *these physical contamination limits, sampling methods, and laboratory methods are subject to modification as prescribed in section 17868.3.3 "Physical Contamination Limit Phase In."* Note: Authority cited: Sections 40502, 43020 and 43021, Public Resources Code. Reference: Sections 43020 and 43021, Public Resources Code.

§ 17868.3.3.Physical Contamination Limit Phase In (new section). CalRecycle may adopt new physical contamination limits, sampling methods, and laboratory analysis methods based on the advice and consensus of the California Compost Standards Working Group. The new physical contamination limits, sampling methods, and laboratory analysis methods 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 yd³ 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.

Suggested Revision:

§ 17868.3.1. Physical Contamination Limits. *(a) Upon adoption, and effective until “Physical Contamination Limit Phase In,” Compost and Digestate produced at an in-vessel digestion facility shall not contain more than 0.5% by weight of physical contaminants greater than 4 millimeters. Compost and Digestate that contains more than 0.5% 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 or digestate 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 17868.3.1(c), must be received by the operator prior to removing compost and digestate from the in-vessel digestion facility or associated composting operation facility where it was produced.*

(b) All in-vessel digestion facilities with an on-site compost process or fully permitted solid waste facilities where final curing, blending, processing or composting occurs (reference codes), shall take one representative sample for every 5,000 cubic-yards of compost produced and send to a laboratory at which physical contaminants greater than 4 millimeters shall be collected and weighed, and the percentage of physical contaminants determined.

(c) Alternative methods of compliance to meet the requirements of this section may be approved by the EA if the EA determines that the alternative method will ensure the physical contaminant requirements of this section are met.

(d) These physical contamination limits are subject to modification as prescribed in section 17868.3.3 “Physical Contamination Limit Phase In.” Note:

Authority cited: Sections 40502, 43020 and 43021, Public Resources Code.

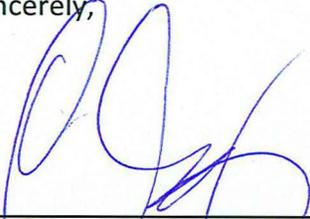
Reference: Sections 43020 and 43021, Public Resources Code.

P. 47, Line 29: Physical Contamination Limits: Recommend: change to, “. . . .”

CONCLUSION

Again, CR&R appreciates the opportunity to comment and provide these specific recommendations to the proposed rule changes. We look forward to working closely with CalRecycle, as an industry partner, to assist in finalizing regulations that work for everyone and help the state achieve its organics management goals.

Sincerely,



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