Questions and Answers: Compostable Materials Regulations

If you have a question that you would like answered here please submit it to permittrainingassistance@calrecycle.ca.gov. Don't forget to make it clear that the question is one you would like placed on this page–include the URL or web address in your e-mail.

Agricultural activities

Question 1: The enforcement agency recently received an enforcement agency notification from a farmer regarding a chicken carcass and chicken manure drying operation. It was inspected in late March and the average temperature was about 100 degrees Fahrenheit. The farmer spreads chicken manure and carcasses separately on the ground to dry out. Depending on the weather and temperature it takes from 2 days to a week to dry. The thickness of the material is from couple of inches to a foot. They stock pile dried manure and ship them out to different buyers on daily basis. There is no screening, bagging operation, or any windrows at this location. They are not adding anything or importing anything from outside for this operation. My questions are:

- Is this operation considered composting or not?
- What does the enforcement agency need from the operator- tonnage reports, laboratory results for pathogen reduction, special occupancies, etc.
- Does the enforcement agency enforce odor impact?
- Is there any time limit to process the feedstock and finished product?
- Does any or all of the things on form DRRR-93 (Rev 4/30) apply to this type of operation?

Answer 1: If the materials are generated on the farm site and are processed on the farm site and the accumulated dried avian tissue and manure does not exceed 121 degrees Fahrenheit this operation is not composting, and is not covered by 14 CCR, Division 7, Chapter 3.1. Therefore, it does not need an enforcement agency notification per the Compostable Materials Handling

Operations and Facilities Regulatory Requirements. However, this operation may be regulated per the Agricultural Solid Waste Management Standards in 14 CCR, Division 7, Chapter 3, Article 8.

Biosolids

Question 1: If both the publicly operated treatment works (POTW) and the biosolids composting site are located on the military base but not adjacent to each other would the permitting tier be, notification?

Answer 1: The immediate surrounding land use (proximity to receptors) and the authority/responsibility that the POTW exerts over the composting facility's operations and control are the key factors. If both the POTW and the associated composting facility are remotely located without receptors between the two, and any odor generation would be controlled by the responsible parties associated with the POTW, then an enforcement agency notification may be the appropriate way to go.

The enforcement agency in this case must make a determination of what constitutes "composting… on-site at a POTW." As guidance, the rationale for granting this enforcement agency notification at the POTW is the level of regulatory oversight given to the POTW. Therefore, if the composting site is miles away with adjacent receptors, as described in the potential odor impact minimization plan, it would be hard to employ this rationale. But even if a substantial topographic barrier existed between the POTW processing areas and the composting site, if the POTW were remotely located it might very well satisfy the rationale and reasonably be considered "composting… on-site at a POTW." A viable argument exists for enforcement agency notification of a biosolids composting at a large, remotely located military base, but the argument is stronger when the surrounding land use is restricted to prevent encroachment that would compromise the determination of the enforcement agency. If it is possible to designate the land use between the POTW and the composting site as "restricted" or "open space / buffer for compostable materials management," the enforcement agency's determination would be better supported.

Question 2: A private firm is proposing to develop a regional biosolids processing facility in a city that will convert sewage sludge into a renewable energy fuel (E-fuel). The facility will be located at the city's wastewater treatment plant and possibly at another location other than the publicly operated treatment works (POTW). The design capacity of the facility will initially be 125 tons per day. The facility will have a storage capacity of 375 dry tons of biosolids (3-4 day capacity). What regulatory tier does this fall?

Answer 2: Assuming that "transformation" (as defined in Public Resources Code section 40201) or "gasification" (as defined in Public Resources Code section 40117) of the biosolids is not occurring on-site then the storage of the biosolids at the POTW is an excluded activity pursuant to 14 CCR

§17855(a)(5)(B). However, if the piles reach a temperature of 122 degrees Fahrenheit then an enforcement agency notification will be required pursuant to 14 CCR §17859.1. If the biosolids are stored at a site other than the POTW and reach a temperature of 122 degrees Fahrenheit then a compostable materials handling facility permit is required pursuant to 14 CCR §17854.

If transformation of the biosolids is occurring on site, then the facility is considered a "transformation facility" and is regulated as a "large volume transfer/processing facility" pursuant to 14 CCR §17402(a)(8) and (30) and will require a full solid waste facilities permit pursuant to 14 CCR §17403.7, and must comply with Public Resources Code sections 44016 and 44017.

If gasification of the biosolids is occurring on-site, the facility may be subject in the future to proposed regulations for conversion technologies.

Note: "Biomass conversion" [as defined in Public Resources Code section 40106(b)] excludes materials that contain sewage sludge.

Question 3: Biosolids composters are required to take at least one monthly sample for pathogens and metals. The quantity of compost produced doesn't really matter.

Other types of composters are required to take a sample for each 5,000 yards of compost produced. If a biosolids facility takes in other waste streams (such as food waste from a prison) does that alter their sampling frequency for that portion of their composting? I noted that in the JTD for a compost site noted two different frequencies for sampling depending on the feedstock type.

Answer 3: Yes, biosolids facilities receive their regulatory status with reduced oversight in 14 CCR, Division 7, Chapter 3.1 due to the regulatory requirements of other agencies and the consistent nature of their feedstock. The addition of non-publicly operated treatment works-generated materials (such as food waste from a state or federal prison) negates the rationale for reduced oversight. As stated above, an "operator who composts green material, food material, or mixed solid waste shall take and analyze one composite sample for every 5,000 cubic-yards of compost produced."

Question 4: If a compost facility permitted by the LEA utilizes biosolids and other compostable materials as feedstock and meets the requirements under 14 CCR, Division 7, Chapter 3.1, is the finished product considered compost or biosolids? Can the finished product be land applied?

Answer 4: Regardless of the feedstock (biosolids, food material, green material, manure, etc.), if the finished compost meets 14 CCR, Division 7, Chapter 3.1, including the requirements for pathogen reduction limits (§17868.3), maximum metal concentrations (§17868.2), and physical contamination limits (operative

January 1, 2018 [§17868.3.1]), then it can be sold, given away, or otherwise used without further restriction under CalRecycle's regulations. The finished product would be considered compost, not biosolids. The restrictions on land application under 14 CCR §17852(a)(24.5) do not apply to finished compost. However, this does not relieve an operator or owner from obtaining all other permits or approvals and complying with any other federal, state or local requirements.

Chipping and Grinding

Question 1: If a green material chipping and grinding activity has more than 1 percent contamination, i.e., tar paper and miscellaneous roofing material, should they apply for a transfer/processing facility permit? How much time do they have to apply? Will they follow the same time frame, 120 days or two years?

Answer 1: Yes, they should apply for a permit. The enforcement agency should prepare and issue a written notice to the operator indicating the determination that the activity is a transfer/processing activity as the facility receives more than 1 percent contamination [14 CCR §17852(a)(21)], and [14 CCR §17862.1(f)]. The enforcement agency should instruct the operator to immediately apply for a transfer/processing solid waste facilities permit. The 120 days or two year period cannot be utilized in this case because it does not qualify as a compostable material operation or facility. The enforcement agency should take the appropriate enforcement action addressing the portion of the operation that requires a solid waste facility permit.

Question 2: Could a chipping and grinding activity that is located on a permitted landfill but does not qualify as an excluded activity be excluded under the provision of 14 CCR §17855(5)(J)-the materials are handled in such a way to preclude their reaching temperatures at or above 122 degrees Fahrenheit as determined by the enforcement agency?

Answer 2: Yes, a chipping and grinding activity could qualify for exclusion under 14 CCR §17855(5)(J), but because it is located at a landfill, the activity should be identified and described in the landfill's joint technical document.

Question 3: What is the enforcement agency inspection frequency for a green material chipping and grinding operation that is regulated as an enforcement agency notification?

Answer 3: 14 CCR, Section 18083(a)(3) requires all operations under the EA Notification Tier with the exception of operations specified in 14 CCR Sections 17383.9., 17403.5., and 17896.9, be inspected by the EA at least once every three (3) months unless the EA approves, with Department concurrence, a reduced inspection frequency. The EA may approve a reduced inspection frequency only if it will not pose an additional risk to public health and safety or

the environment, and in no case shall the inspection frequency be less than once per calendar year.

Question 4: 14 CCR §17852(a)(10)(C)–What specifically does it mean to regulate a chipper/grinder as a compostable material handling operation if only chipping and grinding will be conducted? Please include comment on the following:

- Mulch doesn't require sampling/testing, as no compost will be produced or sold then operator will not have to sample/test?A chipper/grinder receives up to 200 tons per day and falls into the notification tier for chipping and grinding. Material will be on-site for more than 7 days but only chipping and grinding will be taking place; is this operator a composter or a chipper/grinder under notification?
- With regard to chipping/grinding, what is the difference between a green material handling operation/facility and a green material composting operation [§17862.1(f) and §17857.1]. Is the 'difference' intended to take into account that there will be chip/grinders who will not produce/sell compost but also not conform to the 48 hour/7 day throughput?
- Considering the above implications, from a Title 14 regulatory stand point, is the only difference between a notification chipper/grinder (greater than 48 hours/7 days) and a notification composter that the chipper/grinder does not have to comply with Article 7 because no compost is being produced?
- Regarding 14 CCR §17855.4(c), if a previously excluded facility/operation requires a compostable materials handling facility permit, then this facility has 2 years from the time the enforcement agency makes the determination and 'permit' means a full solid waste facility permit? But if a facility/operation comes under notification or registration, how soon must an operator comply after the enforcement agency makes a determination?

Answer 4: If the chipped and ground material does not reach temperatures of 122 degrees Fahrenheit, the activity is not subject to the Compostable Materials Handling Operations and Facilities Regulatory Requirements per 14 CCR §17855(a)(5)(J). If a chipping and grinding operation/facility does reach temperatures greater than 122 degrees Fahrenheit, and the operator cannot comply with 14 CCR §17852(a)(10)(C) because the green material remains on-site for a longer period of time than allowed in §17852 (a)(10)(A)(2) (Each load of green material must be removed from the site within 48 hours of receipt, or the

enforcement agency may allow for up to 7 days), then the site shall be regulated as a compostable material handling operation/facility. This means that the operation/facility is placed into the correct tier under 14 CCR §17857.1 green material composting operations and facilities, and 14 CCR §17862.1 chipping and grinding operations does not apply. For example, if a chipper/grinder receives up to 200 tons per day and falls into the enforcement agency notification tier for chipping and grinding and material will be on-site for more than 7 days but only chipping and grinding will be taking place this operator is still considered a composter and must comply with more requirements. In this example the chipping and grinding facility would be regulated per 14 CCR §17857.1, not 14 CCR §17862.1. However, the enforcement agency has flexibility in applying the sampling requirements [§17868.1(c)], the metals requirements [§17868.2(b)], the pathogen reduction requirements 8 (§17868.3.1).

If the activity has greater than 12,500 cubic yards of feedstock, compost, or chipped and ground material on site at any given time, the operator must comply with:

1. §17863 Report of Composting Site Information
2. §17863.4 Odor Impact Minimization Plan
3. §17865 Siting on Landfills (if applicable)
4. §17866 General Design Requirements
5. §17867 General Operating Standards
6. §17868.1 Sampling Requirements (the enforcement agency can approve alternative methods of sampling)
7. §17868.2 Maximum Metal Concentrations (the enforcement can approve alternative methods of sampling)
8. §17868.3 Pathogen Reduction (the enforcement agency can approve alternative methods of sampling)
9. §17868.5 Green Material Processing Requirements
10. §17869 General Record Keeping Requirements
11. §17870 Site Restoration

If it is determined that the activity falls into the notification tier per 14 CCR §17857.1 and has less than 12,500 cubic yards of feedstock, compost, or chipped and ground material on site at any given time it must comply with:

1. §17863.4 Odor Impact Minimization Plan
2. §17865 Siting on Landfills (if applicable)
3. §17866 General Design Requirements

4. §17867 General Operating Standards
5. §17868.1 Sampling Requirements (the enforcement agency can approve alternative methods of sampling)
6. §17868.2 Maximum Metal Concentrations (the enforcement can approve alternative methods of sampling)
7. §17868.3 Pathogen Reduction (the enforcement agency can approve alternative methods of sampling)
8. §17868.5 Green Material Processing Requirements
9. §17869 General Record Keeping Requirements
10. §17870 Site Restoration

Requirements for chipping/grinding activities:

1. §17863 Report of Composting Site Information (only for those that receive greater than 500 tons per day)
2. §17863.4 Odor Impact Minimization Plan
3. §17865 Siting on Landfills (if applicable)
4. §17866 General Design Requirements
5. §17867 General Operating Standards
6. §17868.5 Green Material Processing Requirements
7. §17869 General Record Keeping Requirements
8. §17870 Site Restoration

14 CCR §17855.4(c), states that if a previously excluded facility/operation requires a "Compostable Materials Handling Facility Permit", then this facility has 2 years from the time the enforcement agency makes the written determination. The "permit" referred to in the regulations is the full solid waste facility permit. Per 14 CCR §17855.3 the label for a solid waste facility permit is "Compostable Materials Handling Facility Permit." Lastly, if a facility/operation that had previously been excluded before the regulations now requires an enforcement agency notification or registration tier as a result of the enforcement agency's written determination, the operator of the activity/facility has 120 days to comply.

Question 5: A business is operating in the county is a mobile green material chipping and grinding business. Agricultural property owners hire the company to chip and grind the trees from their orchards to clear them for new trees or crops. These are one-time jobs. At some job sites the mulch is returned to the same property as soil amendment; in other cases the mulch is hauled away to co-generation plants. The volumes of agricultural green material varies from job to job (depending on acreage). The typical job takes from one to five days.

The operations that return mulch to the same agricultural field appear to fit into the exclusion under 14 CCR §17855(a)(1).

The operations where the mulch is hauled off-site to a co-generation plant do not appear to fall into any of the exclusions under section 14 CCR §17855.

What tier of permit is required? 14 CCR §17862.1 delineates the specific tiers by amount of material "received." These sites do not "receive" any material.

Answer 5: The business would be excluded whether they returned the chipped and ground material to the same agricultural field [14 CCR §17855(a)(1)] or transported it off-site to a co-generation facility [14 CCR §17855(a)(5)(E) or 14 CCR §17855(a)(5)(G)].

Question 6: The scenario is a chipper/grinder who will be regulated as a green material handling operation due to material remaining on-site greater than 7 days and consistently reaching temperature above 122 degrees Fahrenheit. The material will actively compost however the operator will continue to sell his product as mulch.

What are acceptable alternative methods of compliance with the Environmental Standards of Title 14, Chapter 3.1, Article 7? Are there 'Best Management Practices' which the California Department of Resources Recycling and Recovery (CalRecycle) endorses as viable alternatives? Are there alternative methods that are scientifically based that CalRecycle endorses? Where does the burden of proof lay for verifying that an alternative method for pathogen reduction or an alternate sampling method is indeed a sound alternative? Are there existing studies of various alternative methods that have scientific data backing them up? Is a Process to Further Reduce Pathogens (Fed 503) a 'standard'? Or, are the standards pursuant to 14 CCR §17868.3(c) the meeting of the limit concentrations for coliform, Salmonella and metals? If a compost feedstock (chipped and ground material) already meets limit concentration standards as determined through sampling and testing, then is there a need to 'further reduce pathogens'?

Answer 6: Alternative methods provides the flexibility to accommodate differences in feedstock, composting methods and site location. There are no currently "approved" alternative methods for pathogen/metals reduction; they would be approved on a case by case basis. The burden of proof would be on the operator to demonstrate that their process was reducing pathogen/metals under the conditions at their site [14 CCR §17868.3(d)]. The enforcement agency would be responsible for reviewing the process, with technical assistance from CalRecycle, if desired.

Question 7: 14 CCR §17852(a)(21) identifies untreated wood waste as a "green material" and 14 CCR §17852(a)(10) defines "chipping and grinding" if "each load of green material is removed from the site within 48 hours of receipt." However, 14 CCR §17383.3 allows for the storage of construction & demolition wood debris up to 30 days prior to processing and removal of the finished product within 90 days of processing. Does the Notification tier green material chipping and grinding 48-hour limitation apply to all tree trimmers and landscapers who chip and grind between 500 cubic yards and 200 tons per day at a central location and does the clock run from the time the material comes in the gate to processing and removal of the finished product? How should an activity be regulated if it accepts construction & demolition wood debris, green material wood wastes and lumber mill wood waste?

Answer 7: Question 1: Yes, the 48-hour limit applies to all green material chipping and grinding. If the green material remains on-site longer than 48 hours and the enforcement agency has not approved a longer timeframe (up to 7 days) then the site will need to regulated as a green material composting activity. The 30-day timeframe only applies to woody material that is not compostable. Green material is compostable so the 48-hour limit applies. The operation must meet the requirements of the enforcement agency notification tier and all material on-site counts from the time it enters to the time it leaves.

Question 2: The activity should be regulated as multiple wood debris chipping and grinding activities in accordance with 14 CCR §17383.1, shall be deemed a single site, and shall comply with the permitting requirements of Chapter 3, Article 5.9, Article 6 or Chapter 3.1, as determined by the enforcement agency. Each pile shall comply with the appropriate state minimum standard which applies to the type of material.

Question 8: In the compost regulations questions and answers at LEA Central, response #3 states that if a green material chipping and grinding operation receives 200 tpd, material does not remain on-site for more than 2 days and does not reach 122 degrees F., the operation is excluded from regulatory requirements. Wouldn't a green material operation notification be required if more than 500 cy of green material was on-site at any one time, regardless of temperature? At 200 tpd x 2 days = 400 tons. 400 tons divided by 500 cy = 0.8 tons/cy. According to LEA advisory 23 Appendix C, the large limbs and stumps conversion factor is 0.54 tons/cy and green waste prunings are 0.02 tons/cy. Even at 200 tpd for one day and using the 0.54 tons/cy conversion factor, this translates to 370 tons on-site for one day. Why were tons rather than cy used for the chipping and grinding operation regulatory tier determination?

Answer 8: The handing of compostable material is a regulated activity. Green material will "go to temperature" so it is a compostable material. If however, the material is handled in such a way as to preclude it from reaching 122 degrees Fahrenheit, the handling of that material would not be regulated under the compostable material handling requirements found in 14 CCR, Division 7, Chapter 3.1 [see 14 CCR §17855(a)(5)(J)]. This does not mean that other regulations might not apply.

If the green material is handled for a short time, less than 48 hours (or up to 7 days with approval of the enforcement agency) then it is a chipping and grinding activity and the appropriate level of regulation (tier permit) is based on the amount of material received per day, measured in tons because the regulatory tier is based upon throughput. If the material is held longer than 48 hours (or longer than 7 days with approval of the enforcement agency) then it is a compostable material handling activity and the level of regulatory oversight is based on the amount of material held on-site measured in cubic yards.

Question 9: At a landfill, compostable material (green waste) is chipped and ground on a daily basis. Part of the material is used as ADC and the rest is hauled off-site. The material end use is primarily agricultural land application in three counties. Some chipped material may be transported to a landfill for use as ADC.

The following questions have come up that need some clarification on how to apply the regulations.

1. CCR14, Section 17855(5)(J)–If the chipped and ground stockpile material that is being hauled off within 48 hours goes to temperature will that facility need to fall under the tier process based upon the daily tonnage (a separate permit)?
2. CCR14, Section 17855(5)(J)–If the compostable material comes in hot will the operator have time to spread/screen the material to bring the temperature down. (especially grass chippings)?
3. CCR14, Section 17852(10)(A)2–If the site removes green material within 48 hours of receipt and the material does not reach temperature will the site need a separate permit based on tonnage as a chipping and grinding facility?
4. CCR14, Section 17852(10)(B)–If the green material fails to meet the definition because it exceeds the contamination limits must the load go

straight to the disposal area? (I put this in because I was asked what is done about the contaminated load).

5. CCR14 Section 17863.4(a)–The site/facility shall prepare, implement and maintain a site-specific odor impact minimization plan. Should the plan be a standalone plan or should it be a part of the JTD or RDSI. The OIMP is a guidance to on-site operation to personnel.
6. CCR14, Section17863.4(5)(c)(d)–If the plan needs to be revised to reflect any changes it states to make the changes and a copy shall be provided to the EA, within 30 days of those changes. If the plan is incorporated in the permit will that require an owner/operator to submit an application to make revision to the plan?

Answer 9: Landfills under a full permit should not be required to obtain another permit (chipping and grinding) if the sole purpose is to process the green material for alternative daily cover and the rest to be hauloff as beneficial use. Process is identified in the joint technical document/report of disposal site information with the projected average amount being received annually.

Transfer/Processing facilities under a full permit also should not be required to obtain another permit (chipping and grinding) if the material is hauled-off as beneficial use. Same as above.

a) 14 CCR §17855(5)(J)–If the chipped and ground stockpile material that is being hauled off within 48 hours goes to temperature will that facility need to fall under the tier process based upon the daily tonnage (a separate permit)?

Assuming the author of the question has taken into account that the operation described above does not use all the material on-site, it does not qualify for an exclusion per 14 CCR §17855(a)(5)(A). In order to qualify for the exclusion outlined in 14 CCR §17855(a)(5)(J), the operator must be able to handle the materials so that they do not reach 122 degrees Fahrenheit. If this cannot occur the operator has to either include the chipping and grinding operation in the landfill permit or apply for a separate permit. Unless the operator could show that the chipping and grinding operation is completely separate from the landfill operation, the chipping and grinding operation would be a separate unit under the existing landfill permit. The chipping and grinding unit would be inspected separate per the chipping and grinding state minimum standards. If the operation is separate from the landfill operations, placement in the correct tier will be dependent on the daily total amount of green waste accepted at the site.

b) 14 CCR §17855(a)(5)(J)–If the compostable material comes in hot will the operator have time to spread/screen the material to bring the temperature down (especially grass chippings)?

The operation could be excluded per 14 CCR §17855(a)(5)(J) if all the materials are “handled” in such a way that preclude their reaching 122 degrees Fahrenheit as determined by the enforcement agency. The enforcement agency determines how the materials need to be handled to keep the temperatures below 122 degrees. The operator should be discouraged from accepting “hot” materials. If the materials are excluded from 14 CCR §17855(a)(5)(J) they could be regulated per the construction & demolition multiple wood debris chipping and grinding activities, per 14 CCR §17383.1. Also see 14 CCR §17383.2 for information regarding activities at solid waste facilities.

c) 14 CCR §17852(a)(10)(A)(2)–If the site removes green material within 48 hours of receipt and the material does not reach temperature will the site need a separate permit based on tonnage as a chipping and grinding facility?

Assuming the question above is related to the same scenario and some of the material is shipped off-site, the operation would not be excluded from being regulated as discussed in the answer provided above. If compostable materials do not reach 122 degrees Fahrenheit, an operation can be excluded from the compostable materials handling regulations. If the operator cannot handle the materials and the temperature reaches 122 degrees Fahrenheit, see answer to (a) & (b) above. Also note that per 14 CCR §17852(a)(10)(A)(2) the enforcement agency can allow a site to keep green material on-site for up to 7 days if the enforcement agency determines that the additional time does not increase the potential for violations.

d) 14 CCR 17852(a)(10)(B)–If the green material fails to meet the definition because it exceeds the contamination limits must the load go straight to the disposal area?

Yes, this is correct. The operator must reject the load and send it to the landfill for disposal to remain as a chipping and grinding operation.

e) 14 CCR §17863.4(a)–The site/facility shall prepare, implement and maintain a site-specific odor impact minimization plan. Should this plan be a stand-alone plan or should it be a part of the joint technical document or report of disposal site information? The odor impact management plan is guidance to on-site operation to personnel.

Per 14 CCR §17863.4(a) the odor impact management plan is required to be submitted as part of the enforcement agency notification or permit application. For facilities that are required to submit a report of composting site information, the odor impact management plan is required to be included in that report of composting site information and, therefore, is not a stand-alone plan. If an odor impact management plan is required for an operation or facility at a landfill, the odor impact management plan is required to be included in the joint technical document/report of disposal site information and, therefore, is not a stand-alone plan. Any changes to the odor impact management plan would require a report of facility information amendment. For all operations, and chipping and grinding facilities that are in the Registration tier, the odor impact management plan is a stand-alone document.

f) 14 CCR §17863.4(c) & (d)–If the plan needs to be revised to reflect any changes the regulations state to make the changes and a copy shall be provided to the enforcement agency, within 30 days of those changes. If the plan is incorporated in the permit will that require an owner/operator to submit an application to make revision to the plan?

14 CCR §17863.4(c) & (d) require the operator to update the plan when changes occur and annually. For facilities that have the odor impact management plan included in the report of composting site information, transfer/processing report or joint technical document/report of disposal site information, changes to the odor impact management plan would require a report of facility information amendment. For all operations, and chipping and grinding facilities that are in the registration tier, the odor impact management plan is a stand-alone document, therefore, changes in the odor impact management plan do not require an report of facility information amendment.

Question 10: The enforcement agency has received an application for a registration permit for a facility that receives between 200 and 500 TPD of curbside collected green waste to chip into mulch. The green waste has some contamination. The operator conducted a green material contamination study on a random number of the incoming loads and found on average there was approximately 0.8 percent contamination. However, the enforcement agency reviewed the monthly tonnage reports and found on average there was approximately 3.3 percent outgoing residual, monthly. It appears to the enforcement agency that the incoming material is below the 1 percent limit, but during the sorting process the operator is disposing of some material and the outgoing material has greater than the 1 percent contamination limit. Is this facility still eligible to be classified as a chipping and grinding facility? Also, is an operator of a chipping and grinding facility required to prepare a report of composting site information per 14 CCR §17863?

Answer 10: 14 CCR §17852(a)(21) limits contamination to no greater than 1.0 percent of physical contaminants by dry weight. 14 CCR §17868.5 defines what parameters a green material must meet in order to be a feedstock. One of the parameters is that the green material must undergo initial visual load checking and, if deemed necessary, additional evaluation to ensure that physical contaminants are no greater than 1.0 percent of total weight. Any loads with greater than 1.0 percent contamination shall be rejected by the operator.

14 CCR §17862.1(f) states that if a chipping and grinding operation or facility exceeds the contamination limit it shall be regulated as a transfer/processing operation or facility. From the description provided, a study was conducted and the results showed on average 0.8 percent contamination of incoming loads and records indicated that outgoing residual was about 3.3 percent. The regulations refer to physical contaminants in the green waste. It is not an average of loads for the day or month. If the operator does not reject the contaminated loads they would be receiving mixed solid waste thus operating as a transfer/processing operation or facility and would need to operate under the appropriate permit type and state minimum standards for transfer/processing. In this particular example the outgoing residual waste was 3.3 percent. However, it is understood that some of the residual was not contaminants but rather was green waste the operator chose not to process. The contamination level is determined from the incoming loads rather than the outgoing loads. Making a decision on this facility may be difficult. One idea is to have the operator put in writing his business practices for remaining below the 1.0 percent contamination for every incoming load and monitor the implementation of the practice.

CalRecycle found chipping and grinding facilities to be exempt from the report of composting site information requirement as they are not producing compost. This was accomplished through regulation as indicated in 14 CCR §17855.3 which states that any permit issued in Article 2 (Regulatory Tiers for Composting Operations and Facilities) should be called a “compostable materials handling facility permit” except for the permit for chipping and grinding facilities that receive between 200-500 tons per day [14 CCR §17862.1(b)]. In 14 CCR §17863 it states that compostable material handling facilities required to get a compostable materials handling facility permits must file a report of composting site information with the application. The registration permit in this case is not considered a “compostable materials handling facility permit.” Although a report of composting site information is not required, per 14 CCR §18104.1, the regulatory tier requirements, the following items need to be included in the application package:

1. The name and address of the enforcement agency, and the section in Chapters 3, 3.1, or 3.2 of Division 7 of this Title authorizing eligibility for this tier.
2. General description of the facility including, but not limited to name, location, site map, and location map.
3. Facility information, including, but not limited to, volume and type of waste/material handled, peak and annual loading, hours of operation, traffic, facility size, site capacity, and operating area.
4. Operator information, including identification of the land owner, his/her address and telephone number; identification of the facility operator, his/her address and telephone number; and the address(es) at which process may be served upon the operator and owner.
5. Conformance finding information as follows:
    0. Until a countywide or regional agency integrated waste management plan has been approved by CalRecycle, the application shall include statements that: the facility is identified and described in or conforms with the County Solid Waste Management Plan, or otherwise complies with Public Resources Code §50000; and that the facility is consistent with the city or county General Plan.
    1. After a countywide or regional agency integrated waste management plan has been approved by CalRecycle, the application shall include a statement that: the facility is identified in either the countywide siting element, the nondisposal facility element, or in the Source Reduction and Recycling Element for the jurisdiction to be identified in any of these elements pursuant to Public Resources Code §50001.
6. The owner and operator shall each certify under penalty of perjury that the information which they have provided is true and accurate to best of their knowledge and belief.

Question 11:

1. Our jurisdiction has a chipping and grinding operation that grinds horse bedding materials (including manure), green waste, wood waste and

accepts soil. About 50 cubic yards of soil (clean, no construction & demolition), about 2 tons per day clean wood and up to 25 tons per day of tree trimmings (utility tree trimming service brings previously ground materials). The materials are chipped. The product is sent on to a composting facility. The materials do not stay on-site very long. What permit tier does this fall into?

2. What if the facility chips only green waste then mixes it with horse bedding materials (including manure) afterwards? Would this be slotted in the "chipping and grinding permit tier" or a "composting operation/facility?"

Answer 11:

1. Assuming this material is handled in such a way that it is generating temperatures of at least 122 degrees Fahrenheit per the definition of "active compost" in 14 CCR §17852(a)(1), this type of operation cannot be slotted as a chipping and grinding operation [14 CCR §17852(a)(10)(A)(1)] because it accepts manure. With the information provided in question a), this operation/facility would fall into the green material composting operation/facility and need either a notification or a full permit depending on the volume of material on-site at any given time.
2. Assuming this material is handled in such a way that it is generating temperatures of at least 122 degrees Fahrenheit per the definition of "active compost" in 14 CCR §17852(a)(1), under the current version of the Compostable Materials Handling Operations and Facilities Regulatory Requirements there is no difference in scenario a) or b); both would fall into the green material composting operation/facility and need either a notification or a full permit depending on the volume of material on-site at any given time.

Odor

Question 1: Should Enforcement Agencies (EA) and operators respond to non-written complaints? Do EAs and operators need to respond to anonymous complaints?

Answer 1: Title 14, California Code of Regulations (CCR) 18302 and 18303 outline the documentation necessary for a written complaint as well as the criteria for what an odor complaint investigation shall include. Note that CalRecycle considers any complaints received through the CalEPA complaint system or referred in writing to the EA by another agency as written complaints.
The EA may investigate non-written complaints and anonymous complaints at their own discretion. The EA may set their own procedures for handling complaints as described in regulation and their enforcement program plan.
Operators are required to prepare, implement, and maintain a site-specific odor impact minimization plan (OIMP), which includes a protocol for receiving and responding to complaints, and is described in 14 CCR 17863.4 (for compostable material handling facilities and operations) or 14 CCR 17896.31 (for in-vessel digestion facilities or operations).

Question 2: What is the reason for noting an intensity rating on the odor circuit form?

Answer 2: Title 14 CCR 18302(d)(3) describes the requirements for odor complaint investigations. Specifically, subsection (3)(C) states that the EA shall, "document odor characteristics, intensity, and duration at the complainant's location, the solid waste facility/operation, and other odor sources adjacent to the solid waste facility/operation."
Documenting odor intensity will help to verify a complaint as well as to develop data on the specific types of odors observed in and around a compostable material handling activity. The data will assist the EA better identify the source of odors and what operational activities contribute to changes in odor intensity.

Question 3: Who is responsible for fire and smoke complaints at compostable material handling operations and facilities? Do these complaints overlap with odor complaints?

Answer 3: Fire authorities and the air districts have authority over fire and smoke issues at compostable material handling activities. The main concerns relative to fire and smoke are the potential threat to public health and safety and damage to property. Smoke is an air containment that can affect public health and the environment. The operator must report fire and resulting smoke incidents to the EA. The EA may facilitate the sharing of information with the local fire authority and the air district. The EA should investigate the circumstances that lead to the fire to determine if the operator may need to take additional measures to reduce the potential threat of a future fire developing at the site. Note that operators of compostable material handling facilities and operations are required to meet general operating standards relative to fire prevention, protection, and control measures as described in 14 CCR 17867(a)(9).

Question 4: Who has jurisdiction over odors from licensed rendering facilities?

Answer 4: The California Department of Food and Agriculture (CDFA) and local air districts regulate rendering facilities, including animal food manufacturers. They are not subject to solid waste facility regulations pursuant to Title 14 sections 17855 and 17896.6.

Question 5: Who is responsible to inspect odor complaints at rendering facilities?

Answer 5: Odor complaints regarding a rendering activity should be investigated by the local air district.

Question 6: Is there a scenario where an EA can cite a violation for an Odor Impact Mitigation Plan (OIMP) even if there are no odor complaints?

Answer 6: Yes, an EA can cite a violation if they determine that the facility or operation is not following the procedures established in the OIMP pursuant to 14 CCR 17863.4 and 17896.3. All compostable material handling facilities and operations and in-vessel digestion facilities and operations are required to prepare, implement, and maintain a site-specific OIMP as described in Title 14 CCR 17863.4 and 17896.31, respectively. The OIMP shall describe the facility design and operation and be reviewed annually and revised as necessary.

Question 7: Does the EA need to verify odor complaints in person with the complainant? What if the EA is unable to verify a complaint?

Answer 7: CalRecycle recommends that EAs confirm odors directly with a complainant's participation, but it is not required. However, if the complainant is claiming that the odor is interfering with their use and comfortable enjoyment of life or property, their statement (written or verbal) should be documented consistent with and as described in 14 CCR 18302 (d)(3)(B). While verifying the odor complaint, he EA should observe at or near the complainant's location. The EA should make every attempt to verify a complaint. However, if the EA cannot verify the compliant, the EA should document and file the attempts in the investigation record.

Question 8: Which agency is involved with approving the use of chemical/biological additives to odor control misters at compost facilities or operations?

Answer 8: Facility operators must submit to the EA changes to operation and design, including the use of odor control measures, through the appropriate

approval process. Other entities that may be involved with the review of the proposed use of deodorizers include the local land use authority and air districts.

Question 9: What agencies determine the operational or design parameters at compostable material handling operations or facilities?

Answer 9: Local land use authorities, EAs, regional water quality control boards, and air districts may all have a role in reviewing proposed design and operational aspects of a compostable material handing activity.

Question 10: To whom should the EA refer odor complaints regarding agricultural activities?

Answer 10: EAs must investigate complaints regarding a compostable material handling activity. In addition, 14 CCR, Article 8 – Agricultural Solid Waste Management Standards, beginning with section 17801 et seq, provide the EA with authority to investigate agricultural operations relative to excessive vectors, odor, dust, or feathers.
The EA should refer all other odor complaints to the air district.

Question 11: If an operation is not required to have an OIMP, is it required to comply with Title 14 state minimum standards?

Answer 11: Yes.

Question 12: Can EA's use air district findings to "verify" odor complaints?

Answer 12: An EA can use the air district staff inspector findings to assist them in their own investigation of odor complaints. However, the EA cannot rely entirely on air district findings to support their own determination of the validity of a complaint.

Question 13: Does the EA tell the operator what to include in their OIMP?

Answer 13: No, it is the responsibility of the operator to submit an OIMP that is consistent with the requirements in 14 CCR 17863.4 (for composting) or 17896.31 (for in-vessel digestion).

Question 14: When is an Odor Best Management Practices Feasibility Report required?

Answer 14: An operator can voluntarily develop an Odor Best Management Practice Feasibility Report at any time, and an EA may require a report after

consecutive or chronic odor violations pursuant to Title 14 Section 17863.4(f) (for composting(or 17869.31(f) (for in-vessel digestion).

Question 15: Does an OIMP violation require more than one complaint to the EA?

Answer 15: There is no threshold relative to complaints and findings of noncompliance with the requirements to implement an OIMP. At any time that an EA finds that an OIMP is not effective in minimizing odors, they can cite the operator and require a corresponding revision to the OIMP. The EA finding that the OIMP is not effective is not dependent on verified odor complaints.

Question 16: Are EAs responsible for addressing odor issues associated with facilities and operations that handle compostable materials but do not meet the definition of a compostable material handling operation or facility or in-vessel facility?

Answer 16: EAs are only responsible for investigating odor complaints for Title 14 compostable material handling facilities and operations, such as composting, chippers and grinders, and in-vessel digesters.

Question 17: Can other regulatory agencies, such as local air districts, have access to operating documents, such as an Odor Impact Minimization Plan (OIMP), for a specific compost facility? Can other regulatory agencies have access to best management practices used at compostable materials handling facilities and operations?

Answer 17: Yes, OIMPs are part of the operating record of compostable material handling activities and are available to the public.

Regulatory Tiers

Question 1: Operation A is owned and operated by Operator A and is on Parcel A. Operation A currently has a registration permit. Operation B is operated by some as yet undefined operator and is located on Parcel B. Owner A owns Parcel B. This new operation would operate under enforcement agency notification. The properties are contiguous. There may be some equipment, personnel, and feedstock sharing. Is this one operation on two plots of land with the maximum of 12,500 cubic yards of feedstock, compost, or chipped and ground material on-site at any one time; or two operations, each with a maximum of 12,500 cubic yards of feedstock, compost, or chipped and ground material on-site at any one time?

Answer 1: Since the operations on Parcels A & B are sharing equipment, personnel and feedstock this is one operation and should be regulated as such. The operator of the facility described above would be required to obtain a full compostable material handling facility permit. However, if these two operations could operate independently of each other, they could be considered separate and obtain the appropriate notification/permit. See also LEA Advisory 39.

Question 2: A transfer/processing facility with a full permit receives compostable materials. The compostable materials handling is described in the Report of Facility Information. The transfer/processing facility sends compost and wood chips off-site to other facilities/markets. Is this facility excluded per 14 CCR §17855(a)(5)(A), Excluded Activities at Transfer/Processing Facilities?

Answer 2: No, the compostable material handling activity cannot be excluded from the Compostable Materials Handling Operations and Facilities Regulatory Requirements because 14 CCR §17855(a)(5)(A), Excluded Activities at Transfer/Processing Facilities, states that the compostable materials activity must be described in the report of facility information and the materials will only be used on-site. The operator would be required to revise the transfer/processing facility permit to include the compostable materials operation or if the operations are completely separate the operator could request two separate permits.

Question 3: Can the operator of an existing compost facility in the standardized tier evaluate the potential of clean, source-separated drywall as a compost feedstock in a 12-month pilot to determine operational procedures to accommodate this addition? The operator is currently “up-tiering” from a standardized tier to a full tier as required in the new regulations. This process will take about a year. The proposal includes the acceptance of drywall at about 20 tons per day or 500 tons per month or 6,000 tons per year. This will not impact the facility’s total permitted limit of 100,000 tons per year.

Answer 3: Per 14 CCR §17862 an operator can conduct research operations. The research must be separate from the ongoing permitted activities in order to monitor the specific drywall windrow. The regulations limit the cubic yards of the research project to 5,000 cubic yards of feedstock, additives, amendments, chipped and ground material and compost from the research on-site at any one time. The enforcement agency would have to make sure that the research portion of the facility remained under the 5,000 cubic yard limit. The current proposal does not appear to be under the 5,000 cubic yards. The operator would have to provide the enforcement agency with the conversion factor used and a rationale for the conversion factor. Also the operator has to provide all the required information from 14 CCR §17862. Lastly, the operator should plan on including the proposal into the full permit, if it looks like the pilot will be

successful. Additionally, the regulations require that the research operation comply with all the enforcement agency notification tier requirements.

Question 4: If an operator has an existing transfer/processing facility that has a full solid waste facility permit and transfers curbside green waste as part of the operation (no processing is done), is the green waste portion subject to the compostable materials regulations? If so, which part of the regulations? Two different scenarios: In both cases it's just straight transfer of source separated green waste handled apart from municipal solid waste and other waste streams; it's deposited on the ground in a separate area outside the building (municipal solid waste is deposited in the building), pushed into the building and into transfer trailers and taken away. In one case it's always transferred out within 48 hours, maximum. In the other it's always transferred out within 6 days, maximum.

Answer 4: Assuming that the material received at the site qualifies as green material as defined in 14 CCR §17852(a)(21) and assuming that the material continues to qualify as green material as it is handled on the site (for example it is not contaminated with municipal solid waste while being transferred), and assuming that the enforcement agency has already approved holding the material longer than 48 hours but less than 7 days, then this activity falls under 14 CCR §17852(a)(10) in that it is the handling of compostable material. The storage and activities associated with the green material piles should be viewed as a compostable material handling activity and an integral part of the general transfer/processing facility operations. As such it can be included under the transfer/processing facility permit, included in the report of facility information, and should be inspected as a separate unit utilizing the appropriate compostable material handling regulations and appropriate inspection form.

Question 5: A farmer/rancher is proposing to accept green waste generated in a nearby city and perhaps from a Transfer Station for a fee. The farmer/rancher proposes to windrow compost the green waste to kill weed seeds and then incorporate (via disking) the finished compost into the soil on his 505-acre property for soil improvement. Is this operation an agricultural material composting operation, a green material composting operation or facility? Would the agricultural exclusion apply to the operation or facility?

Answer 5: If it is assumed that the farmer/rancher plans on composting green material, as defined in 14 CCR §17852(a)(21), then the facility would be considered a green material composting operation or facility. An agricultural exclusion would not apply to the operation or facility as no exclusions identified in 14 CCR §17855 apply to the proposed operation. If it has up to 12,500 cubic yards of feedstock, compost, or chipped and ground material on-site at any one time, the activity will be an operation that needs to comply with the enforcement

agency notification requirements set forth in 14 CCR, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100). If it has more than 12,500 cubic yards of feedstock, compost, or chipped and ground material on-site at any one time, it will be a facility that will need to obtain a compostable materials handling facility permit pursuant to the requirements of 27 CCR, Division 2, Subdivision 1, Chapter 4, Subchapter 1 and Subchapter 3, Articles 1, 2, 3, and 3.1 (commencing with section 21450) prior to commencing operations.

Question 6: A request has been made to bring curbside green waste (about 10 tons per day) to a parcel adjacent to a permitted landfill. The green waste would be unloaded and then loaded into transfer trailers and taken to a site for processing. What tier would this fall into?

Answer 6: Assuming that the material is "green material", as defined in 14 CCR §17852, this operation would be regulated in the Enforcement Agency Notification tier per 14 CCR §17862.1 as a chipping and grinding operation that receives up to 200 tons per day. As such, each load of green material would have to be removed within 48 hours of receipt, or the local enforcement agency may allow the material to stay on site for up to 7 days if the local enforcement agency determines that the additional time does not increase the potential for violations. This operation can not be excluded per 14 CCR §17855(5)(A) because it is not located within the permitted boundary of the landfill. If the material contains physical contaminants in excess of 1 percent or is commingled with municipal solid waste it will be regulated using the Transfer/Processing Operations and Facilities Regulatory Requirements [14 CCR §17862.1(d)].

Question 7: If an operator of a compostable material handling operation is currently in the Registration Tier and is moving to a lower tier at the five year review will an AB 1497 hearing be required?

Answer 7: No, AB 1497 only applies to revisions of full permits. Please note that regulations are being developed to give further guidance on AB 1497 hearings.

Question 8: 14 CCR 17855 (a)(1), Excluded Activities, has three conditions. If any one of these is not correct then the site is not excluded, correct?

Answer 8: Yes. To qualify for an exclusion under this section, the agricultural material activity must: 1) be agricultural material derived from the agricultural site, and 2) return a similar amount of the material produced to that same agricultural site, or an agricultural site owned or leased by the owner, parent, or subsidiary of the composting activity, and 3) not sell or give away more than an incidental amount of up to 1,000 cubic yards of compost.

Question 9: I have a question about used mushroom compost. The regulations do not state if it can be sold as compost or mulch. If sold as compost, does a copy of pathogens tests, heavy metals, or temperature/ turn records have to accompany the sale of the product? I know that mushroom compost goes through about three pathogen kill phases while making the compost for the mushroom beds. It is a very useable product after the crop of mushrooms has been harvested.

Answer 9: If the used mushroom compost material is handled in such a way that it does not research 122 degrees Fahrenheit then the material is not subject to all of the Compostable Material Handling Operations and Facilities Regulatory requirements [14 CCR 17855(a)(5)(J)]. However, if the used mushroom compost does reach temperature it is subject to regulatory requirements.

Question 10: Is the enforcement agency entirely responsible in determining what constitutes a research composting operation?

Answer 10: Yes, the enforcement agency is responsible for determining in writing if the research compost operation proposed complies with 14 CCR §17862 (a), (b) & (c). CalRecycle staff, in their role as providers of technical support and guidance, is interested in all compost research projects and would like to be informed of all enforcement agency written determinations regarding research notifications. CalRecycle staff would like to share information received about research projects with other enforcement agency jurisdictions and operators.

Question 11: How do the regulations affect individuals, businesses, worker co-operatives, and non-profit groups that wish to compost vegetative materials? Are they exempt from regulations as long as the volume material processed on-site at any given time is less than 100 cubic yards and the footprint of operation is less than 750 square feet.

Answer 11: The exclusion for small-scale activities is for any individual, business, or group as long as there is no more than 100 cubic yards and no more than 750 square feet. this is for the total amount of feedstock and compost on-site at any given time. The feedstock may consist of green material, agricultural material, food material, and vegetative food material, either alone or in combination. If the activity falls within this exclusion, then it would not need to meet any of the requirements set forth in Chapter 3.1. Please note that the excluded activity would be obligated to obtain all permits, licenses, or other clearances that may be required by other regulatory agencies including, but not limited to, local health entities, and local land use authorities.

Question 12: Do the regulations allow individuals, businesses, worker cooperatives, and non-profit groups to transport vegetative scraps from the point of generation to the point of processing as long as the material being transported is less than 15 cubic yards at any point in time.

Answer 12: The regulations do not address the transportation of compostable materials.

Sampling

Question 1: I have a question about pathogen testing. Since our compost is made for agriculture use in fresh vegetables we have to do additional testing of pathogens for Good Agriculture Practices or GAP. In the past we tested for E. Coli, Salmonella, Listeria Monocytogenes and E.C. O157:H7 because you need to test for Salmonella or fecal coliform. We currently test for the fecal coliform and Salmonella but also test for E. Coli, Listeria Monocytogenes and E.C. O157:H7. The problem is now with the addition in the new regulations for the testing of fecal coliform we are coming up with false positives on the fecal coliform test. We will show negative on E. Coli or a very low count, negative for Salmonella, Listeria Monocytogenes and E.C. O157:H7 but be out of count on the fecal coliform. This is only happening to one type of compost we make which is grape pomace. There is a lot of microbial activity going on in the compost which is giving us a false positive. I would like to propose use of the Comgro stick with the old testing of E. Coli, Salmonella, Listeria Monocytogenes and E.C. O157:H7. We would be negative on Salmonella, E.C. O157:H7 and Listeria Monocytogenes but give a level of 100 count of CFU (colony forming unites) on the E. Coli. The testing we do for GAP is more accurate and makes it less likely we would have a pathogen problem.

Answer 1: The operator must insure that the requirements in 14 CCR §17868.3(b) and (c) are met. Per 14 CCR §17868.3(d), the enforcement agency has authority to approve alternative methods for demonstrating compliance with subsection 14 CCR §17868.3(b) and (c) if they provide equivalent reduction of pathogens. Relative to this particular situation the enforcement agency would be advised to require the operator to demonstrate that the proposed alternative testing would demonstrate that the require pathogen reduction has been achieved. After demonstration and approval of the alternative, as long as the operations do not change, the enforcement agency could assume that the requirements will continue to be met. The enforcement agency may wish to require the operator to periodically reaffirm that the alternative methods provide equivalent pathogen reduction.

Resources

- LEA Central
- Proposed Regulations
- Rulemaking Archives

- Current Regulations
- Regulations Implementation
- Legislation and Regulations
- Legislation Implementation
- Solid Waste Facilities Home