

335-13-16-.02 Definitions. For the purpose of this chapter, the following terms have the meaning given below:

(1) “Agronomic Rate” means the land application of by-products at rates of application which provide the crop or forage growth with needed nutrients for optimum health and growth in accordance with acceptable industry technical standards and guidelines to ensure the protection of human health and the environment.

~~(2) “Applicator or End User” means the person, organization, or business that will utilize a by-product material in a manner consistent with these regulations.~~

~~(3)~~(2) “Beneficial Use” means the use of a by-product material as a soil amendment or fertilizer, where the by-product material replaces a natural or other resource material by its utilization.

(3) “Biosolids” are a solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. During this treatment process the domestic sewage is treated physically and chemically to produce this nutrient-rich product.

(4) “By-Product” means a material that is generated as a result of water or wastewater treatment or residual materials from industrial or manufacturing processes that, barring any form of alternate or beneficial use of that material, would otherwise be discarded at a landfill or other solid waste disposal facility.

(5) “Class A Biosolids” is a designation ~~for dewatered and heated sewage sludge~~ that meets U.S. EPA guidelines pursuant to 40 C.F.R. § 503.32 for land application ~~with no restrictions.~~

(6) “Class B Biosolids” is a designation for biosolids that meets U.S. EPA guidelines, pursuant to 40 C.F.R. § 503.32, for land application, but does not meet the requirements for Class A Biosolids.

~~(6)~~(7) “Distributor ~~or Supplier~~” means the person, organization, ~~or~~ business, industry, agency, or institution who utilizes and/or~~provides or~~ resells by-product material for beneficial use to an applicator or end user.

(8) “Dry Short Ton” means 2,000 pounds (lbs) of material with 0% moisture content.

(9) “Feed Crops” means crops produced primarily for consumption by animals.

(10) “Fiber Crops” means crops such as flax and cotton.

(11) “Food Crops” means crops consumed by humans. These include, but not limited to, fruits, vegetables, and tobacco.

(12) “Food Processing Residuals” or “FPR” means by-product that is generated from food processing facilities and may include other materials with pathogen potential.

(13) “FPR Treatment” means the usage of biological, physical, chemical, and/or mechanical processes along with retention time to characteristically change FPR into Treated FPR Material.

(14) “FPR Treatment Facility” means the person, organization, business, industry, agency or institution that operates FPR treatment impoundments.

(15) “FPR Treatment Impoundment” is a surface feature certified in accordance with ADEM Admin. Code r. 335-13-16-.08(54) capable of containing FPR materials for the storage and treatment of FPR.

~~(7)~~ (16) “Generator” means the person, organization, business, industry, agency or institution whose activities or business results in the initial generation of a by-product material to be used for beneficial use.

(17) “Mine-Land Recovery” means the use of biosolids at mine spoil areas which have been released from regulatory control by the Alabama Surface Mining Commission or the Alabama Department of Labor, as appropriate, in an effort to rehabilitate otherwise unusable land.

(18) “Multi-Owner Property” means contiguous parcels of land, which are owned by two (2) or more different individuals, and operated as a single farm.

(19) “Property Boundary” means the outer boundary of a property owner’s contiguous property, which may consist of one or more parcels.

(20) “Residential End-User” means a person(s) who obtain(s) Class A Biosolids for use in lawns and gardens on their private residential properties.

(21) “Staging” means the transportation and positioning of by-product material immediately [within forty-eight (48) hours] preceding land application.

(22) “Storage” means the temporary [a period exceeding forty-eight (48) hours] holding of by-product material prior to land application activities when not immediately possible due to outside constraints.

(23) “Treated FPR Material” means FPR treated to the extent described in ADEM Admin. Code r. 335-13-16-.08 as the result of biological, physical, chemical, or mechanical processes and retention time in FPR treatment impoundment(s).

(24) “Yield Goal” means the expected production of the intended crop per acre in the given calendar year.

Author: S. Scott Story; [Richard T. Kelsey](#)

Statutory Authority: Code of Alabama 1975, §22-27-9 and §22-27-12

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335-13-16-.03 Specific Requirements for Land Application of By-Product Materials.

(1) By-product materials may be eligible for consideration for land application under this rule, where such materials meet the following requirements:

(a) The material, proposed for beneficial use, must be a “by-product” as defined in 335-13-~~16-.02~~; and ~~16-.02~~.

(b) The by-product material proposed for beneficial use must: ~~be adequately characterized to confirm that the proposed use is adequately protective of the human health and the environment and that the by product possesses physical and/or chemical properties which make the material suitable for the intended agronomic rate as defined in 335-13-16-.02.~~

1. Be characterized [as required by ADEM Admin. Code r. 335-13-16-.04(2)(c)10.];

2. Possess physical and/or chemical properties which make the material suitable for the intended agronomic application rate as defined in ADEM Admin. Code r. 335-13-16-.02; and

3. Not be a hazardous waste as defined in ADEM Admin. Code r. 335-14-1-.02.

~~(c) The by product material proposed for beneficial use must not be a hazardous waste as defined in 335-14-1-.02.~~

(2) ~~The proposed beneficial use must conform to the following use-specific standards.~~ Residential End-Users are exempt from this chapter unless an immediate threat to human health or the environment is observed in association with this use.

(3) Generators and/or Distributors conducting Mine-Land Recovery activities must utilize biosolids, as defined in this chapter, and must adhere to all applicable requirements of 40 C.F.R. § 503.

(4) The proposed beneficial use must conform to the following use-specific standards:

(a) The proposed beneficial use must utilize a by-product ~~in such a manner that the by-product~~ serves as a suitable replacement for a raw material or other feedstock and, through its use, provides a benefit comparable to the material it is proposed to replace.;

(b) The proposed beneficial use of by-product material must not be managed in a manner that constitutes ~~serve the purpose of~~ discarding or disposing ~~of the by-product~~, as ~~determined~~ provided in ADEM Admin. Code r. 335-13-16-.04(8)(c); by the Department.

(c) An Operations Plan (OP) and a Nutrient Management Plan (NMP) are required for the site or sites where by-product materials will be applied. These plans are to be amended updated as application site locations or conditions change. The amended plan must be submitted in accordance with ADEM Admin. Code r. 335-13-16-.04(5)(b), except as provided below: ~~Class A biosolids, and industrial by products approved by the Department on a case-by-case basis, are exempt from the requirements to develop a Nutrient Management Plan.~~

1. An NMP is not required for properties on which only Class A Biosolids (e.g. not mixed with other materials) are land applied; and

2. An exemption from the development of an NMP may be requested for an industrial by-product. This request must include by-product characterization as required by ADEM Admin. Code r. 335-13-16-.07(3). An industrial by-product proposed to be exempted from the requirement for a NMP may include materials from privately owned industrial facilities which treat self-generated industrial wastewater, and shall not contain the following:

i. FPR material;

ii. Material that is generated or treated by publically owned or privately owned treatment works treating domestic sewage and municipal wastewater; or

iii. Hazardous waste as defined in ADEM Admin. Code r. 335-14-1-.02.

~~1. An industrial by-product proposed to be exempted from the development of a nutrient management plan pursuant to the citation above, must not contain food processing waste material nor sewage sludge that is generated or treated by publically owned or privately owned treatment works treating domestic sewage and municipal wastewater. Industrial by-products may include materials from privately owned industrial facilities which treat domestic sewage along with industrial wastewater.~~

~~(d) Applicators and end users who do not own the property on which the by-product material is proposed to be utilized shall obtain written consent from the landowner prior to the land application of by-product material.~~Distributors who do not own the property on which the by-product material is proposed to be utilized shall obtain written consent from the landowner prior to the land application of by-product material. The Distributor must provide the landowner information including the material characterization as required by ADEM Admin. Code r. 335-13-16-.07(3), any potential odor issues, and any crop restrictions; and

(e) These rules and regulations do not supersede any other state or federal regulations regarding beneficial use or waste disposal. ~~Persons generating or utilizing ors, distributors, and end users of~~ Persons generating or utilizing ors, distributors, and end users of beneficially used by-product materials shall comply with this chapter and any other applicable state and federal rules and regulations.

(5) The placement, dumping, disposal, or other use of a by-product material in a manner inconsistent with the requirements of this chapter may be considered an unauthorized dump as defined in ADEM Admin Code r. 335-13-1-.03. The responsible party may be subject to revocation of the Registration and enforcement action by the Department in accordance with ADEM Admin. Code r. 335-13-1-.13.

~~(3) (6) Land application of by product materials regulated under ADEM Admin. Code div. 335-6 Volume 1 is exempt from the requirements of this chapter.~~Land application of by-product materials regulated by the following are exempt from the requirements of this chapter:

(a) ADEM Admin. Code chap. 335-6-8 (Ground Water – and – Underground Injection Control);

(b) ADEM Admin. Code chap. 335-6-7 (...Animal Mortality Management Requirements for Owners and Operators of Animal Feeding Operations (AFOs) and Concentrated Animal Feeding Operations (CAFOs); and

(c) _____ Products licensed by the Alabama Department of Agriculture and Industries as a commercial fertilizer, fertilizer material, soil conditioner, or soil amendment or permitted by the Alabama Department of Agriculture and Industries as a liming material.

Author: S. Scott Story; [Richard T. Kelsey](#)

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335-13-16-.04 ~~Notification and/or Registration Application Requirements.~~

(1) ~~Initial Notification.~~ In order for the Department to develop the universe of potentially regulated entities, the Department requires the following information: Generators that produce one hundred (100) dry short tons per calendar year or more of eligible by-product material for beneficial use in the State of Alabama must electronically submit the following items to the Department:

(a) ~~All generators and distributors or suppliers that handle and/or use by product material for beneficial use, and are not exempt from the requirements of this chapter, must within 90 days of the effective date of these rules, notify the Department in writing of the following information:~~ A completed electronic ADEM Form 569 with the applicable fees in accordance with ADEM Admin. Code div. 335-1;

1. ~~The quantity of by-product materials in dry tons handled during the previous calendar year;~~

2. ~~Type(s) of by product materials land applied in the past calendar year; and~~

3. ~~Counties within the State where the land application has occurred within the past calendar year.~~

(b) ~~All generators and distributors or suppliers desiring to handle and/or use by-product material for beneficial use after the effective date of this chapter shall notify the Department in writing with the following information at least forty-five (45) days prior to handling and/or using by product material for beneficial use:~~ The type of material being generated, such as FPR, Class A Biosolids, Class B Biosolids, etc., and expected quantity (in dry short tons) to be generated for use under this chapter per calendar year; and

1. ~~The expected quantity of by product materials in dry tons to be handled during a calendar year; and,~~

2. ~~The expected type(s) of by product materials to be applied in a calendar year; and~~

3. ~~The counties within the State where the land application is expected to occur in a calendar year.~~

(c) A list of Distributors that manage and land apply the by-product materials for beneficial use in the State of Alabama.

(2) ~~Registration Application Requirements.~~ Distributors that manage and land apply one hundred (100) dry short tons per year or more of eligible by-product material for beneficial use in the State of Alabama must electronically submit the following items to the Department:

(a) ~~Generators that handle 100 dry tons per year or more of eligible by product material for beneficial use must submit the following items to the Department:~~ A completed ADEM Form 569 with the applicable fees in accordance with ADEM Admin. Code div. 335-1;

1. ~~A completed application form with the applicable fees, and;~~

2. ~~A list of distributors or suppliers that handle the by-product materials.~~

(b) ~~Distributors or Suppliers subject to the requirements of this chapter that handle 100 dry tons per year or more of eligible by-product material for beneficial use must submit the following items to the Department:~~The type of material being distributed, such as FPR, Class A Biosolids, Class B Biosolids, etc., and expected quantity (in dry short tons) to be land applied under this chapter per calendar year;

~~1. A completed application form with the applicable fees;~~

~~2. A Nutrient Management Plan(s) prepared and signed by a person certified by the Natural Resources Conservation Service (NRCS) for nutrient management planning or prepared, signed and sealed by a professional engineer licensed in the State of Alabama, or prepared and signed by other certified professionals approved by the Department.~~

(c) A NMP which, at a minimum, includes the following:

(i) ~~1. The Nutrient Management Plan, at a minimum, should include the following:~~Signature certification, including applicable credentials, clearly displayed on the first page of the plan, that the plan was prepared by a person certified by the Natural Resources Conservation Service (NRCS) for nutrient management planning, by a professional engineer licensed in the State of Alabama, or by other appropriate professionals approved by the Department;

(i) ~~2. Property description;~~Brief site specific description of the operation; including the type/classification of material being land applied;

(ii) ~~3. Brief description of the operation;~~Crops and soils information, including: site suitability for proposed application activities, crop rotation plans, harvesting cycle plans, and seasonal land application schedule;

(iii) ~~4. Crops and soils information;~~Yield goal for the given crop and site, or Department approved equivalent;

(iv) ~~5. Yield goal information;~~The recommended nitrogen and phosphorus application rates for the crops to be grown on each application zone. Limits for nitrogen and phosphorous may be imposed by the Department to protect human health and the environment;

(v) ~~6. The recommended nitrogen application rates for the crops to be grown on each application zone;~~Timing and specific method of applications for each site;

(vi) ~~7. Timing and method of applications; and,~~Description of best management practices to be implemented at each site to protect human health and the environment including but not limited to preventing run-off, managing run-on, and minimizing odors;

(vii) ~~8. Best management practices to protect human health and the environment.~~Property description(s), site(s) address(es), site(s) coordinates in decimal degrees, and aerial view of property boundaries;

9. Provide copies of signed permission by the landowners where by-products are land applied. This permission shall include acknowledgement of compliance with ADEM Admin. Code r. 335-13-16-.03(4)(d); and

10. Testing analysis/results for the ceiling concentration of constituents listed in ADEM Admin. Code r. 335-13-16-Appendix I shall be provided and the concentrations shall not exceed those listed. Testing for fecal coliform shall be conducted in accordance with 40 C.F.R. § 503.32(b)(2). Fecal coliform limits may be imposed by the Department to protect human health and the environment. The Department may require testing for additional constituents as applicable.

~~3. (d) An Operations Plan for handling and transportation of the by product material which, at a minimum shall include best management practices for minimizing the following:~~

1. Signature certification, including applicable credentials, clearly displayed on the first page of the plan that the plan was prepared by a person certified by the NRCS for nutrient management planning, by a professional engineer licensed in the State of Alabama, or by other appropriate professionals approved by the Department; and

2. The plan shall include best management practices and mitigation actions detailing the handling, transportation, and application of the by-product material to minimize:

~~(i) Vectors and birds;~~

~~(ii) Birds Odors and fugitive air borne dust;~~

~~(iii) Spills; and, Odors;~~

~~(iv) The amount of time in transit. Fugitive air borne dust;~~

~~(v) Spills; and~~

~~(vi) Time in transit, with consideration to the type of material, which includes efforts made to avoid traffic congestion, accidents, populated areas, or other factors as determined by the Department.~~

~~(e) (3) All entities subject to 335-13-16 .04(2)(a) or (2)(b) shall submit a registration application to the Department within one hundred eighty (180) days of the effective date of 335-13-16. New entities desiring to begin operation after the effective date of 335-13-16 must submit a completed registration application to the Department prior to beneficially using a by product as required by 335-13-16 .04(2)(a) or (2)(b). All Distributors that manage or land apply less than one hundred (100) dry short tons per year of eligible by-product material for beneficial use in the State of Alabama must maintain all required records to be available for inspection upon request in accordance with ADEM Admin. Code r. 335-13-16-.04(2)(c) and (d).~~

~~(3) (4) Upon the review and determination that an application is consistent with these regulations, the Department shall issue a registration to the applicant, subject to the following conditions: No later than October 1, 2022, FPR Treatment Facilities subject to the requirements of this chapter that manage eligible by-product materials for beneficial use in the State of Alabama must electronically submit the following items to the Department:~~

~~(a) Registrations issued by the Department are only valid for uses conducted within the state of Alabama. A completed ADEM Form 569 with the applicable fees in accordance with ADEM Admin. Code div. 335-1; and~~

~~(a)(b)~~ All items required in ADEM Admin Code r. 335-13-16-.08. Upon utilization of the material, a by-product for which a Registration has been issued shall no longer be subject to 335-13-1 through 335-13-15 regulations provided the by-product is utilized in a manner consistent with the terms and conditions of the Registration.

(5) Registration Modifications.

(a) A request to modify an existing registration that changes the registration type and/or causes changes to the previously issued registration, outside of the registration renewal period, must electronically submit ADEM Form 569, all applicable fees in accordance with ADEM Admin. Code div. 335-1, and any further pertinent records at least thirty (30) days before the desired registration change.

(b) Submissions of addendums to the NMP and/or OP, excluding those defined in ADEM Admin. Code r. 335-13-16-.04(5)(a), are considered Registration Information Updates. A Registration Information Update including addendums or additions to the approved NMP and OP must be electronically submitted for Department review at least fourteen (14) calendar days prior to the anticipated initial land application date. Upon determining the Registration Information Update to be complete, the Department will acknowledge completion to the registrant and incorporate the updated information into the current registration.

(6) Beginning on October 1, 2022, these registrations will transition to a three (3) year registration cycle.

(7) Applicants who submit a complete registration renewal application at least thirty (30) days prior to the expiration date of their existing registration, shall have their existing registration administratively extended, until such time as the Department makes a final determination on the registration renewal application.

(8) Upon the Department's review and determination that an application is consistent with these regulations, the Department shall issue, renew, or modify a registration to the applicant, subject to the following conditions:

(a) Registrations issued by the Department are only valid for activities conducted within the State of Alabama.;

(b) By-product material for which a Registration has been issued shall no longer be subject to ADEM Admin. Code chaps. 335-13-1 through 335-13-15 provided the by-product is utilized in a manner consistent with the terms and conditions of the Registration and the requirements of ADEM Admin. Code chap. 335-13-16;

~~(b)(c)~~ The placement, dumping, disposal, or other use of a by-product material in a manner inconsistent with the Registration may be considered an unauthorized dump as defined in ADEM Admin. Code r. under 335-13-1-.03, and tThe responsible party may be subject to revocation of the Registration and/or enforcement action by the Department in accordance with ADEM Admin. Code r. under 335-13-1-.13.;

~~(e)(d)~~ The issuance of a Registration does not exempt the generator, distributor, nor end user registrant from compliance with other applicable regulatory requirements when managing or beneficially using a by-product under these regulations.; and

~~(d)(e)~~ If an registrant or applicant is determined to be in significant noncompliance

with the requirements of this chapter, the ~~R~~egistration may be revoked or the application for ~~R~~egistration may be denied by the Department.

~~(4) — All generators and distributors or suppliers that handle less than 100 dry tons per year of eligible by product material for beneficial use along with all applicators and end users must maintain records on site as contained in paragraphs (2)(b)2. and 3. of this section.~~

~~(a) — The placement, dumping or other use of a by product material in a manner inconsistent with the requirements of this chapter may be considered an unauthorized dump as defined in under 335-13-1-03 and the responsible party may be subject to enforcement actions by the Department under 335-13-1-13.~~

Author: S. Scott Story; [Richard T. Kelsey](#)

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335-13-16-.05 Operating Criteria for Storage, Staging and Land Application of By-Product Materials.

~~(1) The by product material storage and land application areas shall be located a minimum of five hundred (500) feet from any inhabited building. The Department may require larger buffer zones at its discretion. Exclusions to this requirement are made for on site structures occupied by the landowner or farm operator, Class A biosolids, and industrial by-products as defined under 335-13-16-.03(2)(c)1.~~ Notification of intent to land apply at a given registered location shall be electronically submitted to the Department by the registered Distributor at least forty eight (48) hours before land application activity begins, and at a minimum shall contain the following:

- (a) Physical address of site(s), along with GPS coordinates in decimal degrees;
- (b) Material being land applied to the site(s); and
- (c) Expected duration of land application and associated activities for the site(s).

~~(1)(2) The by product storage and land application areas shall be located a minimum of one hundred (100) feet from surface waters of the State, as defined in ADEM Admin. Code ch. 335-6-10, measured from the ordinary high water mark. The Department may require larger buffer zones at its discretion.~~ After all activity has concluded at the site(s), notification of completion of land application and associated activities at a given location shall be electronically submitted to the Department within seven (7) calendar days.

~~(2)(3) The by product storage and land application areas shall be located a minimum of one hundred (100) feet from the property boundary.~~ All transport and application site staging of FPR material shall be in closed container(s). Container(s) shall be kept closed unless adding or removing material, until land applied in accordance with these regulations.

~~(3)(4) Limitations may be placed on the agronomic application rates by the Department when determined necessary to protect human health and the environment.~~ By-product material storage, application site staging, and land application areas shall be:

(a) Located a minimum of one hundred (100) feet from public roads and right of ways (excluding land application of Class A Biosolids);

(b) Located a minimum of five hundred (500) feet from public and private drinking water wells;

(c) Located a minimum of five hundred (500) feet from any inhabitable building. Exceptions to this requirement are allowed for on-site structures occupied by the landowner or farm operator, Class A Biosolids, and industrial by-products for which an NMP is not required pursuant to ADEM Admin. Code r. 335-13-16-.03(4)(c)1. and 2.;

(d) Located a minimum of one hundred (100) feet from surface waters of the State, as defined in ADEM Admin. Code r. 335-6-10-.02, measured from the ordinary high water mark; and

(e) Located a minimum of one hundred (100) feet from the property boundary. This requirement does not apply to Class A Biosolids and internal parcel/property boundaries of Multi-Owner Properties, as defined by ADEM Admin. Code r. 335-13-16-.02.

(5) By-products to be land applied shall not exceed the ceiling concentration limits established in ADEM Admin. Code r. 335-13-16-Appendix I.

(6) Limitations may be placed on the agronomic application rates by the Department when determined necessary to protect human health and the environment.

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335-13-16-.06 ~~Recordkeeping and Reporting Requirements.~~ Reserved

~~(1) Registrations issued under 335-13-16-.04 of these regulations are subject to annual reporting and re-registration requirements, which are as follows:~~

~~(a) The applicant to whom a Registration is issued shall be required to submit an annual report with the applicable re-registration fee to the Department. All annual reports and fees shall be submitted to the Department no later than February 28th of each year, for activity conducted during the previous calendar year. At a minimum, the report must contain the following information:~~

~~1. The quantity of the by-product materials handled during the previous calendar year;~~

~~2. An updated list of all the counties in which by-product materials were used and or/distributed for use during the previous calendar year;~~

~~3. A signed certification from the generator stating that the physical and chemical characteristics of the by-product materials are consistent with the information submitted in the approved application along with documentation of inconsistencies; if applicable and,~~

~~4. Compliance Certification. The applicant shall submit a complete and accurate compliance certification that shall include the following:~~

~~(i) The identification of each term or condition that is the basis of the certification and method for determining compliance status;~~

~~(ii)(i) The applicant's compliance status related to each term or condition and documentation of whether the compliance has been continuous or intermittent; and,~~

~~(iii) Such other facts as the Department may require to determine the compliance status of the entity.~~

Author: S. Scott Story

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335-13-16-.07 Variances Operating Criteria for Food Processing Residual. ~~The Department may grant individual variances only from specific provisions of this chapter that are in addition to or more stringent than any applicable federal regulations. The individual variances must be granted based upon the procedures of 335-13-8-.02 through 335-13-8-.05 whenever it is found by the Department, upon presentation of adequate proof, that non-compliance with one or more of these provisions will not threaten the public health or unreasonably create environmental pollution.~~

(1) All Distributors managing and land applying FPR shall adhere to the following additional requirements:

(a) The site restrictions listed in 1-8 of this section shall be met when FPR is land applied; or the pH of by-product material land applied shall be raised to twelve (12) or higher by alkali addition and, without the addition of more alkali, shall remain at twelve (12) or higher for thirty (30) minutes and the site restrictions in 1-4 of this section shall be met:

1. Food crops with harvested parts that touch the by-product/soil mixture and are totally above the land surface shall not be harvested for fourteen (14) months after application of by-product material;

2. Food crops with harvested parts below the surface of the land shall not be harvested for twenty (20) months after application of by-product material when the by-product material remains on the land surface for four months or longer prior to incorporation into the soil;

3. Food crops with harvested parts below the surface of the land shall not be harvested for thirty-eight (38) months after application of by-product material when the by-product material remains on the land surface for less than four months prior to incorporation into the soil;

4. Food crops, feed crops, and fiber crops shall not be harvested for thirty (30) days after application of by-product material;

5. Animals shall not be grazed on the land for thirty (30) days after application of by-product material;

6. Turf grown on land where by-product material is applied shall not be harvested for one (1) year after application of the by-product material when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the Department;

7. Public access to land with a high potential for public exposure shall be restricted for one (1) year after application of by-product material; and

8. Public access to land with a low potential for public exposure shall be restricted for thirty (30) days after application of by-product material.

(2) One of the land application requirements listed below shall be met when FPR is land applied:

(a) Subsurface injection (material is placed underneath the soil surface and is immediately incorporated into and under the soil surface), unless otherwise approved by the Department on a case by case basis. The Department may require the Distributor to

demonstrate that the requested alternative method of application will provide control of odors and vectors at least as effectively as subsurface injection, or

(b) The pH of by-product material shall be raised to twelve (12) or higher by alkali addition and, without the addition of more alkali, shall remain at twelve (12) or higher for thirty (30) minutes.

(3) By-products, including but not limited to FPR, shall not be applied to the land if the concentrations of any constituent listed in ADEM Admin. Code r. 335-13-16-Appendix I exceeds the ceiling concentration and either the cumulative loading rate or the monthly average concentration found in ADEM Admin. Code r. 335-13-16-Appendix I.

(4) The annual agronomic rate for by-product material land applied shall not exceed the annual agronomic rate, as applicable, calculated using Equation 1, or other Department approved method:

Equation 1: $AAR = \frac{N}{0.0026}$, where AAR is the annual agronomic rate in gallons per acre per 365 day period and N is the amount of nitrogen in pounds per acre per 365 day period needed by the crop or vegetation grown on the land.

(5) All transport and application site staging shall adhere to ADEM Admin. Code r. 335-13-16-.05(3).

Author: S. Scott Story; [Richard T. Kelsey](#)

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335-13-16-.08 Operating Criteria for Food Processing Residuals Treatment Impoundments.

(1) FPR Treatment Impoundments must adhere to all requirements for Distributors as specified in ADEM Admin. Code ch. 335-13-16, including the additional requirements specified in ADEM Admin. Code r. 335-13-16-.07.

(2) The registrant shall ensure that all contents of the impoundment(s) are retained except as permitted under ADEM Admin. Code chap. 335-6-6.

(3) Location of FPR Treatment Impoundments must comply with all buffer zones in accordance with ADEM Admin. Code r. 335-13-16-.05(4).

(4) FPR Treatment Impoundments must have an appropriate volume-to-surface area ratio to facilitate sufficient retention time for effective and efficient treatment to protect human health and the environment. Details documenting this must be provided in the NMP.

(5) FPR Treatment Impoundments must be NRCS certified. Documentation of certification must be submitted to the Department before operation begins. In the case of existing FPR Treatment Impoundments, the registrant must obtain certification that the impoundment was constructed to current engineering standards to document the integrity of the impoundment.

(6) The FPR Treatment Impoundment must maintain at all times sufficient freeboard to contain a twenty-four (24) hr/twenty-five (25) yr rain event or at least twenty-four (24) inches of freeboard, whichever is greater. The Department may consider an equivalent alternate overflow management system(s), as warranted (e.g. additionally available freeboard in an adjacent impoundment, nearby tank, etc.). Run-on controls shall be implemented to protect the FPR Treatment Impoundment from excess stormwater from the surrounding watershed.

(7) At the deepest point of the impoundment, the grease cap thickness shall not exceed twenty-five (25) % of the maximum operational depth at any given time, regardless of season.

(8) Treated FPR Material Requirements.

(a) An NMP and OP as defined by ADEM Admin. Code r. 335-13-16-.04(2)(c) and (d) is required with the following additions:

1. The Treated FPR Material application rate will be based on nutrient analysis (agronomic rate) and retention time (treatment level); and

2. NMP must include a sludge (bottom solids) management plan for the impoundment(s).

(b) Treated FPR Material must comply with ADEM Admin. Code r. 335-13-16-.07(1) and (3) and ADEM Admin. Code r. 335-13-16-.04(2)(c)10.

(c) Application of Treated FPR Material must adhere to all buffer zones listed in ADEM Admin. Code r. 335-13-16-.05(4).

(9) Reporting Requirements.

(a) All applications must include testing results described in ADEM Admin. Code r. 335-13-16-.07(3). Materials must be tested according to the NMP and annual reporting requirements as required by ADEM Admin. Code r. 335-13-16-.09. Application surface and substrate must be tested for all constituents listed in ADEM Admin. Code r. 335-13-16-Appendix I, nitrogen, phosphorus, and other constituents as required by the Department.

(b) Renewal applications and annual reports must include all information required in ADEM Admin Code r. 335-13-16-.09, in addition to the following:

1. Amounts of FPR received and amounts of Treated FPR Material applied throughout the calendar year;

2. Counties where Treated FPR Material was applied;

3. Nutrient value testing results and agronomic loading rates; and

4. The results from testing required in ADEM Admin. Code r. 335-13-16-.07(3) and the fecal coliform test results required in ADEM Admin. Code r. 335-13-16-.04(2)(c)10.

Author: S. Scott Story; Richard T. Kelsey

Statutory Authority: Code of Alabama 1975, §22-27-9 and §22-27-12

History: Proposed: January 20, 2022

335-13-16-.09 Recordkeeping and Reporting Requirements.

(1) All reporting, submittals, and correspondence for ADEM Admin. Code r. 335-13-16-.09 shall be electronically submitted in a format approved by the Department.

(2) All registrants subject to 40 C.F.R. § 503 must submit duplicate reports required under 40 C.F.R. § 503 in the annual report as described in ADEM Admin. Code r. 335-13-16-.09(3).

(3) Registrations issued pursuant to ADEM Admin. Code r. 335-13-16-.04 are subject to annual reporting requirements. All annual reports for activity conducted during the previous calendar year shall be submitted to the Department no later than February 28th of each year, for activity conducted during the previous calendar year. At a minimum, the report must contain the following information:

(a) The total quantity, in dry short tons, of by-product materials generated/managed/land applied during the previous calendar year;

(b) An updated list of all the counties in which by-product materials were used or distributed for use during the previous calendar year and how much material was generated/managed/land applied in each county;

(c) If the registrant is subject to ADEM Admin. Code r. 335-13-16-.04(2)(c), then annually performed test results in accordance with ADEM Admin. Code r. 335-13-16-.04(2)(c)10., the ceiling concentration for all constituents listed in ADEM Admin. Code r. 335-13-16-Appendix I, and the nitrogen and phosphorus rates as required by ADEM Admin. Code r. 335-13-16-.04(2)(c)5. must be submitted with the annual report;

(d) The yield of the crop grown and harvested, production destruction event/result, if applicable (e.g. drought, fire, pestilence, etc.), or a Department approved alternative (e.g. number of animals raised/grazed, etc.), for each approved application site listed in the NMP(s). This number(s) should be reported in short tons/acre or equivalent industry standard;

(e) A signed certification from the Generator affirming that the physical and chemical characteristics of the by-product materials applied were consistent with the information submitted in the approved application together with documentation of any inconsistencies. Generator certifications must be unique to each Generator facility; and

(f) A complete and accurate compliance certification, which shall include the following:

1. An itemized list with the identification of each term or condition that is the basis of the certification and method for determining compliance status. This itemized list includes, but is not limited to, the items found in ADEM Admin Code chap. 335-13-16 and the Registration;

2. The applicant's compliance status related to each term or condition and documentation of whether the compliance has been continuous or intermittent;

3. A statement signed by a responsible official including the following language, "I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and

evaluate the information submitted. I understand that the information provided will be used to determine compliance with ADEM Admin. Code chap. 335-13-16 Requirements for Beneficial Use of By-Product Materials for the Purpose of Land Application. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”; and

4. Such other information as the Department may require to determine the compliance status of the entity.

(4) Operating Record: All registered facilities shall maintain the following records for a minimum of five (5) years from generation of the record and make them available for inspection upon request:

(a) Registration, including all applications and supplemental information;

(b) Annual reports;

(c) OP and NMP, as applicable; and

(d) Notification(s) of intent and completion to land apply, for Distributors only, as required in ADEM Admin. Code r. 335-13-16-.05(1-2).

Author: S. Scott Story; Richard T. Kelsey

Statutory Authority: Code of Alabama 1975, §22-27-9 and §22-27-12

History: Proposed: January 20, 2022

335-13-16-.10 Variances. The Department may grant individual variances only from specific provisions of this chapter that are in addition to or more stringent than federal regulations. The individual variances must be granted based upon the procedures of ADEM Admin. Code rs. 335-13-8-.02 through 335-13-8-.05 whenever it is found by the Department, upon presentation of adequate proof, that non-compliance with one or more of these provisions will not threaten the public health or unreasonably create environmental pollution.

Author: S. Scott Story; Richard T. Kelsey

Statutory Authority: Code of Alabama 1975, §22-27-9 and §22-27-12

History: Proposed: January 20, 2022

335-13-16-Appendix I Constituent Concentration Limits*

<u>Constituent</u>	<u>Ceiling Concentration (mg/kg)†</u>	<u>Cumulative Loading Rate (kg/ha) [lb/ac]</u>	<u>Monthly Average Concentration (mg/kg)†</u>
<u>Arsenic</u>	<u>75</u>	<u>41 [37]</u>	<u>41</u>
<u>Cadmium</u>	<u>85</u>	<u>39 [35]</u>	<u>39</u>
<u>Copper</u>	<u>4,300</u>	<u>1,500 [1,338]</u>	<u>1,500</u>
<u>Lead</u>	<u>840</u>	<u>300 [268]</u>	<u>300</u>
<u>Mercury</u>	<u>57</u>	<u>17 [15]</u>	<u>17</u>
<u>Molybdenum</u>	<u>75</u>	<u>N/A</u>	<u>N/A</u>
<u>Nickel</u>	<u>420</u>	<u>420 [375]</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>	<u>100 [89]</u>	<u>100</u>
<u>Zinc</u>	<u>7,500</u>	<u>2,800 [2,498]</u>	<u>2,800</u>

†Dry Weight Basis

*Taken from 40 C.F.R. § 503.13 Tables 1, 2, and 3

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Statutory Authority: Code of Alabama 1975, §22-27-9 and §22-27-12

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