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312 Rosa L. Parks Ave., 8th Floor, Snodgrass/TN Tower
Nashville, TN 37243
Phone: 615-741-2650
Email: publications.information@tn.gov

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Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing (Tenn. Code Ann. § 4-5-205).

Pursuant to Tenn. Code Ann. § 4-5-229, any new fee or fee increase promulgated by state agency rule shall take effect on July 1, following the expiration of the ninety (90) day period as provided in § 4-5-207. This section shall not apply to rules that implement new fees or fee increases that are promulgated as emergency rules pursuant to § 4-5-208(a) and to subsequent rules that make permanent such emergency rules, as amended during the rulemaking process. In addition, this section shall not apply to state agencies that did not, during the preceding two (2) fiscal years, collect fees in an amount sufficient to pay the cost of operating the board, commission or entity in accordance with § 4-29-121(b).

Agency/Board/Commission:	Environment and Conservation
Division:	Solid Waste Management
Contact Person:	Nick Lytle
Address:	William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 14th Floor Nashville, Tennessee
Zip:	37243
Phone:	(615) 532-8004
Email:	Nickolaus.Lytley@tn.gov

Revision Type (check all that apply):

- Amendment
 New
 Repeal

Rule(s) (ALL chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please make sure that ALL new rule and repealed rule numbers are listed in the chart below. Please enter only **ONE** Rule Number/Rule Title per row)

Chapter Number	Chapter Title
0400-11-01	Solid Waste Processing and Disposal
Rule Number	Rule Title
0400-11-01-.01	Solid Waste Disposal Control System: General
0400-11-01-.02	Permitting of Solid Waste Storage, Processing, and Disposal Facilities
0400-11-01-.03	Requirements for Financial Assurance
0400-11-01-.04	Specific Requirements for Class I, II, III, and IV Disposal Facilities
0400-11-01-.07	Fee System for Non-Hazardous Disposal and Certain Non-Hazardous Processors of Solid Waste
0400-11-01-.10	Convenience Centers / County Public Collection Receptacles
0400-11-01-.11	Requirements for Compost and Composting Facilities
0400-11-01-.13	Requirements for Land Application Facilities

Place substance of rules and other info here. Please be sure to include a detailed explanation of the changes being made to the listed rule(s). Statutory authority must be given for each rule change. For information on formatting rules go to http://sos-tn-gov-files.s3.amazonaws.com/forms/Rulemaking%20Guidelines_September2016.pdf.

Chapter 0400-11-01
Solid Waste Processing and Disposal

Amendments

Paragraph (2) of Rule 0400-11-01-.01 Solid Waste Disposal Control System: General is amended by deleting the current definition of “medical wastes” and substituting instead in alphabetical order a new definition of “medical wastes” to read as follows:

“Medical wastes” means the following solid wastes:

- (a) Wastes generated by hospitalized patients who are isolated to protect others from communicable diseases (see the current U. S. Centers for Disease Control ~~“Guidelines for Isolation Precautions in Hospitals”, July, 1983~~ guidance related to preventing transmission of infectious agents in healthcare settings for definition of diseases requiring such isolation).
- (b) Cultures and stocks of infectious agents, including specimen cultures from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate, and mix cultures.
- (c) Waste human blood and blood products such as serum, plasma, and other blood components.
- (d) Pathological wastes (i.e., tissues, organs, body parts, and body fluids) that are removed during surgery and autopsy.
- (e) All discarded sharps (e.g., hypodermic needles, syringes, pasteur pipettes, broken glass, scalpel blades) used in patient care or which have come into contact with infectious agents during use in medical, research, or industrial laboratories.
- (f) Contaminated carcasses, body parts, and bedding of animals that were intentionally exposed to pathogens in research, in the production of biologicals, or in the in vivo testing of pharmaceuticals.
- (g) The following wastes from patients known to be infected with blood-borne disease:

Contaminated wastes from surgery and autopsy (e.g., soiled dressings, sponges, drapes, lavage tubes, drainage sets, underpads, surgical gloves).

Wastes from medical, pathological, pharmaceutical, or other research, commercial, or industrial laboratories that were in contact with infectious agents (e.g., specimen containers, slides and cover slips, disposable gloves, lab coats, aprons).

Wastes that were in contact with the blood of patients undergoing hemodialysis, including contaminated disposal equipment and supplies such as tubing, filters, disposable sheets, towels, gloves, aprons, and lab coats.

Discarded equipment and parts that were used in patient care, medical and industrial laboratories, research, and in the production and testing of certain pharmaceuticals and that may be contaminated with infectious agents.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Paragraph (2) of Rule 0400-11-01-.01 Solid Waste Disposal Control System: General is amended by adding in alphabetical order with the current definitions a definition for the term “long term custodial care” and “recovered

materials” to read as follows:

“Long term custodial care” means those inspections, maintenance, and monitoring activities necessary to insure that a Class I or Class II facility, which has completed post closure certification, will not impact human health or the environment. The time period used to describe these activities is 50 years from the date of post closure certification.

“Recovered materials” means those materials which have been diverted or removed from the solid waste stream to for sale, use, reuse, or recycling, whether or not requiring subsequent separation processing. Such recovered materials are not solid wastes.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Rule 0400-11-01-.01 Solid Waste Disposal Control System: General is amended by adding a new paragraph (6) to read as follows:

(6) Electronic Submittal

These rules require submittals of applications and reports. To aid in the review or processing of an application or report, the Commissioner may request the submission of the application or report to include a copy of the application or report in an electronic format acceptable to the Commissioner. When requested by the Commissioner the additional electronic copy of the application or report shall be submitted in accordance with the Commissioner’s instruction.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Part 3 of subparagraph (b) of paragraph (1) of Rule 0400-11-01-.02 Permitting of Solid Waste Storage, Processing, and Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

3. The following facilities or practices are not subject to the requirement to have a permit:
 - (i) Disposal of septic tank pumpings;
 - (ii) Junkyards;
 - (iii) Reclamation of surface mines;
 - (iv) Disposal of farming wastes at facilities which are on the site of generation and with a fill area of less than one acre in areal extent when completed;
 - (v) Disposal of landscaping and land clearing wastes at facilities which are on the site of generation and with a fill area of less than one acre in areal extent when completed;
 - (vi) Disposal of construction/demolition wastes at facilities which are on-site of generation and with a fill area of less than one acre in areal extent when completed;
 - (vii) Burning solid wastes for energy recovery or processing solid wastes to produce a fuel or processing solid waste for materials recovery, provided such burning or processing occurs on the site of generation or at a site owned or operated by the same corporation or subsidiaries of such corporation;
 - (viii) Processing or disposal of solid wastes at hazardous waste management facilities authorized by permit or interim status under Rule 0400-12-01-.07, or the management of the solid waste is regulated under Chapter 0400-12-01;
 - (ix) Baling, shredding, and mechanical or other processing of solid waste on the site of generation or at a site owned or operated by the same corporation or subsidiaries of such corporation;

- (x) Processing of industrial wastewaters in on-site facilities subject to regulation under T.C.A. § 69-3-101 et seq.;
- (xi) Processing or disposal of the following materials:
 - (I) Domestic sewage and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned wastewater treatment works for treatment;
 - (II) Industrial wastewater discharges that are point source discharges subject to permits under T.C.A. § 69-3-101 et seq.;
 - (III) Irrigation return flows;
 - (IV) Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.);
 - (V) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process;
 - (VI) Farming wastes which are returned to the soil as fertilizers; and
 - (VII) Mining overburden returned to the mine site;
- (xii) Processing or disposal of solid wastes by deep underground injection which are permitted under the Water Quality Act pursuant to the Underground Injection Control ~~Regulations~~ regulations Chapter ~~1200-04-06~~ 0400-45-06.
- (xiii) The use of solely natural rock, dirt, stumps, pavement, concrete and rebar, and/or brick rubble as fill material.
- ~~(xiv) The use and/or disposal of Petroleum contaminated soil and rock generated from the clean-up of leaking Underground Storage Tank sites regulated under Chapter 0400-18-01, provided such materials are treated and the benzene level is below 5 ppm and the total petroleum hydrocarbon level is below 100 ppm and provided that the method of treatment was reviewed and approved by the Division of Underground Storage Tanks.~~
- ~~(xiv)~~ (xiv) The processing of waste tires at facilities that are permitted or otherwise authorized by this Chapter to store and/or dispose of waste tires.
- ~~(xv)~~ (xv) The storage of solid waste that is recyclable material incidental to its recycling, reuse, reclamation or salvage provided that upon request of the Commissioner, the operator demonstrates to the satisfaction of the Commissioner that there is a viable market for all stored waste and provided that all waste is stored in a manner that minimizes the potential for harm to the public and the environment. ~~Material~~ Recyclable material may not be stored for more than one (1) year without written approval from the Division.
- ~~(xvii)~~ (xvi) The storage of solid waste incidental to its collection. (The storage of solid waste at permitted facilities and permit-by-rule facilities and storage in a manner constituting disposal are not exempt from permitting requirements).
- ~~(xviii)~~ (xvii) The collection of “used oil” and/or the processing of used oil filters, provided that the used oil and/or filters are received directly from “do-it-yourselfers” as the terms are defined at T.C.A. § 68-211-1002.
- ~~(xix)~~ (xviii) The processing of landscaping or land clearing wastes or unpainted, unstained, and untreated wood into mulch.

~~(xx)(xix)~~ The land application of both publicly-owned treatment works water sludges and publicly-owned treatment waste water sludges from facilities that are subject to regulatory standards of the Department's Division of Water ~~Supply and Division of Water Pollution Control Resources~~.

~~(xxi)(xx)~~ The burning of natural and untreated wood, landscaping wastes, landclearing wastes in either an air curtain destructor or by open burning.

~~(xxii)(xxi)~~ The beneficial use of waste, which does not constitute disposal, ~~provided that upon request of the Commissioner, that~~ the generator demonstrates, to the satisfaction of the Commissioner, ~~that such use~~ is not detrimental to public health, safety, or the environment.

~~(xxii)~~ Recovered materials processing facilities engaged solely in the storage, processing and resale or reuse of recovered materials, provided all the following conditions are met:

~~(I)~~ Prior to commencing operations, the owner or operator notifies the Commissioner on forms provided by the Department and completed in accordance with the instructions accompanying it, which include:

~~I.~~ The facility name, owner, mailing and location address;

~~II.~~ The type(s) of material to be received;

~~III.~~ The maximum storage capacity at the facility for the storage of each material identified in subitem II of this item;

~~IV.~~ A general description of the recovered materials processing operation; and

~~V.~~ Any information requested by the Commissioner to determine the amount of financial assurance needed, if any, pursuant to item (VII) of this subpart;

~~(II)~~ Prior to implementing a change in ownership, location, type of material received, increase in storage capacity for a material, or method of processing, the owner or operator:

~~I.~~ Notifies the Commissioner of the proposed change by submitting updated forms in accordance with item (I) of this subpart; and

~~II.~~ Complies with item (VII) of this subpart;

~~(III)~~ All material arriving at the facility to be processed has been diverted or removed from the solid waste stream for sale or a beneficial use or reuse;

~~(IV)~~ The owner or operator manages all solid waste generated as a result of recovered materials processing from the point of generation and provides for its proper disposal in accordance with the requirements of this chapter;

~~(V)~~ The owner or operator manages the recovered material and/or product as a valuable commodity when it is under the owner or operator's control and minimizes:

~~I.~~ The propagation, harborage, or attraction of flies, rodents, or other disease vectors;

- II. The potential for explosions or uncontrolled fires;
- III. The potential for releases of recovered materials or process residues to the environment except in a manner authorized by state and local air pollution control, water pollution control, and/or waste management agencies; and
- IV. The potential for harm to the public through unauthorized or uncontrolled access;
- (VI) Upon request of the Commissioner, the operator demonstrates, to the satisfaction of the Commissioner, that there is a viable market for the sale of, or a beneficial use or reuse of, the recovered material;
- (VII) Upon request of the Commissioner, after receiving the initial notification pursuant to item (I) of this subpart or a change in the information pursuant to item (II) of this subpart, the operator files with the Commissioner a financial assurance instrument that complies with subparagraph (3)(d) of Rule 0400-11-01-.03 in an amount determined by the Commissioner to be sufficient to ensure proper closure and post-closure care of the facility, after taking into consideration the potential value of the recovered materials and the cost for an independent third party to remove for proper management all of the recovered materials to be stored or processed assuming the maximum extent of facility operation;

(Note: Financial assurance will not be required for recovered materials processing facilities that are government-owned or if the value of the recovered materials is more than the cost for an independent third party to remove for proper management all of the recovered materials to be stored or processed assuming the maximum extent of facility operation.)
- (VIII) The owner or operator maintains the records necessary to demonstrate:
 - I. Compliance with items (III), (IV), and (VI) of this subpart; and
 - II. That the maximum storage capacity at the facility for the storage of each recovered material has not been exceeded; and
- (IX) If applicable, in accordance with T.C.A. § 68-211-871 and subparagraph (5)(c) of Rule 0400-11-01-.09, the owner or operator submits an annual report by type of material by March 31st of each year as directed by the Commissioner.

Authority: T.C.A. §§ 68-211-101 et seq., 68-211-801 et seq. and 4-5-201 et seq.

Subpart (i) of part 2 of subparagraph (c) of paragraph (1) of Rule 0400-11-01-.02 Permitting of Solid Waste Storage, Processing, and Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

- (i) T.C.A. Title 68, Chapter 211, Part 7, known as the “Jackson Law,” authorizes counties and municipalities to opt-into its provisions in accordance with T.C.A. § 68-211-707. If a local government does so, it may then approve or disapprove the proposed new construction for solid waste disposal by landfilling ~~(including coal ash fills)~~ and solid waste processing facilities in accordance with T.C.A. § 68-211-704. For purposes of T.C.A. § 68-211-105(h), a “new landfill for solid waste disposal” or a “new solid waste landfill” means any of the following:
 - (I) A solid waste landfill that received a tentative decision from the

department to issue a permit after June 2, 1989 (the date the Jackson Law went into effect);

- (II) A lateral expansion (a modification that expands the previously permitted footprint) of a solid waste landfill described in item (I) of this part; and
- (III) A solid waste landfill described in item (I) of this part whose owner or operator proposes to accept waste that would require a change of the landfill's classification under this chapter to a classification with higher standards (i.e., from a Class III/IV landfill to a Class I or II landfill, or from a Class II to a Class I).

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Paragraph (2) of Rule 0400-11-01-.02 Permitting of Solid Waste Storage, Processing, and Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

(2) Permits by Rule

(a) ~~All permit by rule facilities shall keep any records that are required by these rules and a copy of its permit by rule authorization at the facility or at another location approved by the Department. Notwithstanding any other provision of this rule, except for subparagraph (1)(c) of this rule, and provided they are not excluded pursuant to part (1)(b)3 of this rule, the following classes of activities shall be deemed to have a permit by rule if the conditions listed are met: Except as specifically allowed in part 1 of this subparagraph, the owner or operator of the facilities or activities listed in parts (b)1 through 7 of this paragraph shall be deemed permitted and are authorized to operate upon receipt of a written authorization from the Commissioner.~~

~~1. Owners or operators of existing facilities or activities listed in parts (b)1 through 7 of this paragraph authorized and operating on the effective date of these rules to manage solid waste may continue to operate the facility or activity consistent with the notification, including the written narrative and any required attachments, currently on file with the Department, until the owner or operator:~~

~~(i) Is required by the Commissioner to comply with subparagraph (c) of this paragraph by submitting a complete updated notification by the date required by the Commissioner; and~~

~~(ii) Receives a written authorization from the Commissioner.~~

~~2. Owners or operators of facilities or activities seeking a written authorization from the Commissioner after the effective date of these rules must:~~

~~(i) Satisfy the requirements of parts 4 through 8 of this subparagraph if applicable;~~

~~(ii) Obtain all necessary prior approvals in accordance with subparagraph (1)(c) of this rule;~~

~~(iii) Submit a complete notification in compliance with the requirements of subparagraph (c) of this paragraph; and~~

~~(iv) Pay all applicable fees as required by Rule 0400-11-01-.07.~~

~~3. After receiving a written authorization from the Commissioner, pursuant to part 1 or 2 of this subparagraph, the owner or operator must:~~

~~(i) Pursuant to subparagraph (d) of this paragraph, comply with the requirements of subparagraph (b) of this paragraph, as applicable to the owner's or operator's facility or activity, and any recordkeeping requirements specified in the written authorization deemed necessary by the Commissioner after reviewing the written~~

narrative and any required attachments to document site specific compliance with this paragraph;

(ii) Operate the facility or activity consistent with the notification submitted in accordance with part (c)2 of this paragraph;

(iii) Maintain an up-to-date notification file, including the written narrative and any required attachments, by notifying the Commissioner of substantive changes in the information submitted pursuant to part (c)2 of this paragraph (e.g., a change in ownership, location, type of material received, storage capacity for a material, method of processing, etc.) and receive an amended written authorization from the Commissioner prior to implementing the change;

(iv) Keep the following records at the facility or at another location approved by the Commissioner:

(I) The written authorization from the Commissioner;

(II) The notification information submitted to comply with subpart 1(iii) of this subparagraph and subpart (iii) of this part; and

(III) Any records specifically required by subparagraphs (b) and (c) of this paragraph, and as specifically required by the Commissioner in the written authorization, except those records specifically identified in the written authorization from the Commission that need only be kept for three years from the date the record is generated;

(Note: The period of retention referred to in item (III) of this subpart is extended automatically during the course of any unresolved enforcement action regarding the facility or activity.)

(v) Upon the request of the Commissioner, furnish any records required by subpart (iv) of this part and make them available at all reasonable times for inspection, when requested by any representative of the Commissioner; and

(vi) Pay all applicable fees as required by Rule 0400-11-01-.07.

4. New solid waste processing facilities, tire storage facilities, and transfer stations shall ~~shall~~ **must** not be located in wetlands, unless the owner or operator makes the applicable demonstrations to the Commissioner as referenced at subparagraph (2)(p) of Rule 0400-11-01-.04.

5. ~~The facility~~ Processing facilities, tire storage facilities, and transfer stations must not be located in a 100-year floodplain unless it is demonstrated to the satisfaction of the Commissioner that:

(i) Location in the floodplain will not restrict the flow of the 100-year flood nor reduce the temporary water storage capacity of the floodplain; ~~and~~

(ii) The facility is designed, constructed, operated, and maintained to prevent washout of any solid waste.

6. ~~The facility does~~ Processing facilities, tire storage facilities, and transfer stations ~~must~~ not:

(i) Cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; or

(ii) Result in the destruction or adverse modification of the critical habitat of endangered or threatened species.

7. ~~The owners or operators~~ An owner or operator proposing a new solid waste processing facility or a transfer station that handles putrescible wastes located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used only by piston-type aircraft must ~~include in the permit-by-rule notification a demonstration~~ demonstrate to the satisfaction of the Commissioner that the facility does not pose a bird hazard to aircraft.
8. ~~The owners or operators~~ An owner or operator proposing a new solid waste processing facility or a transfer station that handles putrescible wastes located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the appropriate Federal Aviation Administration (FAA) office.
9. ~~While authorized to operate under this paragraph, the owner or operator is exempt from the requirements of the following paragraphs of this rule: (3) (Application for a Permit), (4) (Processing the Permit), (5) (Terms of the Permit), and (6) (Transfer, Modification, Revocation and Reissuance, and Termination of Permits), and from Rules 0400-11-01-.03 (Requirements for Financial Assurance) and 0400-11-01-.04 (Specific Requirements for Class I, II, III, and IV Disposal Facilities), except the extent these paragraphs or rules are referenced by this paragraph.~~

(b) Permit by rule eligible facilities or activities.

1. ~~A processing facility, if:~~ Processing facilities.
 - (i) ~~The operator complies with the notification requirement of subparagraph (b) of this paragraph; Except as specified in subparts (ii) of this part, an owner or operator of a processing facility must:~~
 - ~~(ii)(I)~~ Construct, operate, maintain, and close the facility in such a manner as to minimize:
 - ~~(i)~~ I. The propagation, harborage, or attraction of flies, rodents, or other disease vectors;
 - ~~(ii)~~ II. The potential for explosions or uncontrolled fires;
 - ~~(iii)~~ III. The potential for releases of solid wastes or solid waste constituents to the environment except in a manner authorized by state and local air pollution control, water pollution control, and/or waste management agencies; and
 - ~~(iv)~~ IV. The potential for harm to the public through unauthorized or uncontrolled access;
 - ~~(iii)(II)~~ Ensure that the facility has an artificial or natural barrier which completely surrounds the facility and a means to control entry, at all times, through the gate or other entrances to the facility;
 - ~~(iv)(III)~~ The facility, Ensure that the facility, if open to the public, has clearly visible and legible signs at the points of public access which indicate the hours of operation, the general types of waste materials that either will or will not be accepted, emergency telephone numbers, schedule of charges (if applicable), and other necessary information;
 - ~~(v)(IV)~~ Trained Ensure that the facility has trained personnel ~~are always~~ present during operating hours ~~to operate the facility;~~

- ~~(vi)(V)~~ The facility has Ensure that the facility has adequate sanitary facilities, potable water, emergency communications (e.g., telephone), and shelter available for personnel;
- ~~(vii)(VI)~~ The facility's Ensure that the facility has access road(s) and parking area(s) are constructed so as to be accessible in all weather conditions;
- ~~(viii)(VII)~~ Except for composting facilities utilizing landscaping and land clearing wastes only, Restrict all waste handling (including loading and unloading) at the facility is conducted on to paved surfaces;
- ~~(ix)(VIII)~~ There is no Limit the storage of solid wastes at the facility except in the to containers, bins, lined pits or on paved surfaces, designated for such storage;
- ~~(x)(IX)~~ Except for incinerators or energy recovery units, there is no burning of Not burn solid wastes at the facility;
- ~~(xi)(X)~~ There is no Prohibit scavenging of solid wastes at the facility and limit any salvaging is conducted at to safe, designated areas and times, as indicated in the written narrative submitted pursuant to subpart (c)2(vi) of this paragraph;
- ~~(xii)(XI)~~ Wind Ensure that wind dispersal of solid wastes at or from the facility is adequately controlled, including the daily collection and proper disposal of that windblown litter and other loose, unconfined solid wastes are collected daily and properly disposed;
- ~~(xiii)(XII)~~ All Ensure that all liquids which either drain from solid wastes or are created by washdown of equipment at the facility ge are collected and directed to either:
- (+) I. A wastewater treatment facility permitted to receive such wastewaters under T.C.A. §§ 69-3-101 et seq. (Tennessee Water Quality Control Act, or
- (+) II. Other methods approved by the Commissioner.
- ~~(xiv)(XIII)~~ The facility receives no Ensure that special wastes are not received, unless:
- (+) I. Such receipt has been specifically approved in writing by the Department Commissioner, and
- (+) II. Special procedures and/or equipment are utilized to adequately confine and segregate the special wastes;
- ~~(xv)(XIV)~~ The operator can demonstrate, at the request of the Commissioner, that Have alternative arrangements (e.g., contracts with other facilities) for the proper processing or disposal of the solid wastes his authorized to be managed at the facility handles are available in the event his the facility can not cannot operate;
- ~~(xvi)(XV)~~ The facility has properly maintained and located Properly maintain and locate fire suppression equipment (e.g., fire extinguishers, water hoses) and make them continuously available in sufficient quantities to control accidental fires that may occur;
- ~~(xvii)(XVI)~~ All Manage all waste residues resulting from processing activities at the facility are managed in accordance with this Chapter these rules or

Chapter 0400-12-01 (Hazardous Waste Management), whichever is applicable, and/or with any other applicable state or federal regulations governing waste management;

~~(xviii)(XVII) The facility is finally closed by removal of~~ When closing the facility, remove all solid wastes and solid waste residues for proper disposal.

~~(XVIII) The operator must notify~~ Notify the Division Director in writing of ~~his the~~ completion of closure of the facility. ~~Such notification must and~~ include a certification ~~by the operator~~ that the facility has been closed by removal of all the solid waste and residues; ~~. Within 21 days of the receipt of such notice the Division Director shall inspect the facility to verify that closure has been completed. Within 10 days of such verification, the Commissioner shall approve the closure in writing to the operator. Closure shall not be considered final and complete until such approval has been made.~~

~~(xix) New solid waste processing facilities shall not be located in wetlands, unless the owner or operator makes the applicable demonstrations to the Commissioner as referenced at subparagraph (2)(p) of Rule 0400-11-01-.04.~~

~~(xx) The facility must not be located in a 100-year floodplain unless it is demonstrated to the satisfaction of the Commissioner that:~~

~~(I) Location in the floodplain will not restrict the flow of the 100-year flood nor reduce the temporary water storage capacity of the floodplain.~~

~~(II) The facility is designed, constructed, operated, and maintained to prevent washout of any solid waste.~~

~~(xxi) The facility does not:~~

~~(I) Cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; or~~

~~(II) Result in the destruction or adverse modification of the critical habitat of endangered or threatened species.~~

~~(xxii)(XIX) The owner/operator may not store solid waste until the processing equipment has been installed~~ Install the processing equipment on-site and ensure it is ready for use before accepting solid waste for storage or processing;

~~(xxiii)(XX) The owner/operator of a solid waste processing facility which has a solid waste storage capacity of 1000 cubic yards or greater shall file~~ Prior to receiving solid waste for processing, or within 90 days of the effective date of these rules, if authorized and operating on the effective date of these rules:

I. File with the Commissioner a performance bond or equivalent cash or securities, payable to the State of Tennessee. ~~Such financial assurance is intended to ensure that adequate financial resources are available to~~ in an amount determined by the Commissioner to ~~insure~~ be sufficient to ensure the proper operation, closure, and post closure care of the facility;

~~II. The types of Submit financial assurance instruments that are acceptable are those specified in subparagraph (3)(d) of Rule 0400-11-01-.03; and.~~

~~III. Such Ensure that the financial assurance ~~shall meet~~ meets the criteria set forth in T.C.A. § 68-211-116(a), and ~~at~~ complies with subparagraph (3)(b) of Rule 0400-11-01-.03.~~

~~(XXI) Maintain records documenting the amounts of the different types of solid waste at the facility, including, but not limited to, the amounts stored to be processed, in process and that have completed processing.~~

~~(xxiv) The owners or operators proposing a new solid waste processing facility that handles putrescible wastes located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used only by piston-type aircraft must include in the permit-by-rule notification a demonstration that the facility does not pose a bird hazard to aircraft. The owners or operators proposing a new solid waste processing facility that handles putrescible wastes located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the appropriate Federal Aviation Administration (FAA) office.~~

~~(ii) Item (i)(IX) of this part does not apply to incinerators or energy recovery units.~~

~~(iii) Within 21 days of the receipt of ~~such~~ the certification of closure notice submitted by an owner or operator in accordance with item (i)(XVIII) of this part, the Division Director ~~shall~~ will inspect the facility to verify that closure has been completed to the satisfaction of the Division Director. Within 10 days of such verification, the Commissioner ~~shall~~ will approve the closure in writing to the operator. Closure shall not be considered final and complete until such approval has been made.~~

2. ~~Reserved. A coal ash fill area, if:~~

~~(i) The coal ash disposed of is not hazardous as defined in subparagraph (1)(c) of Rule 0400-12-01-.02 of the rules governing hazardous waste management.~~

~~(ii) The coal ash disposed of is fly ash, bottom ash, or boiler slag resulting primarily from the combustion of fossil fuel.~~

~~(iii) Disposal is limited to:~~

~~(I) Coal ash in engineered structures for the following projects: a highway overpass, levee, runway, or foundation backfill.~~

~~(II) Such other similar uses as the Commissioner may approve in writing. Financial assurance may be required by the Commissioner if deemed appropriate for these case-by-case projects.~~

~~(iv) The operator complies with the notification requirement of subparagraph (b) of this paragraph;~~

~~(v) The fill area is constructed, operated, maintained, and closed in such a manner as to minimize:~~

~~(I) The potential for harmful release of solid wastes or solid waste constituents to the environment; and~~

~~(II) The potential for harm to the public through unauthorized or uncontrolled~~

access;

- ~~(vi) — The fill area, until development is complete, must have an artificial or natural barrier to control access of unauthorized entry.~~
- ~~(vii) — There must be equipment available that is capable of spreading and compacting the coal ash, and capable of handling the earthwork required during the periods that coal ash is received at the fill area.~~
- ~~(viii) — The coal ash fill project is designed with:
 - ~~(I) — A geologic buffer of at least three feet with a maximum saturated conductivity of 1×10^{-6} centimeters per second between the base of the fill and the seasonal high water table of the uppermost unconfined aquifer or the top of the formation of a confined aquifer, or such other protection as approved by the Commissioner taking into account site specific coal ash and soil characteristics, ambient groundwater quality, and projected flows in and around the site; and~~
 - ~~(II) — A ground water monitoring program approved by the department that reports sampling results to the department at least once each year. If sampling results indicate that the fill area has caused the ground water protection standards to be exceeded, the owner or operator of the facility shall commence an assessment monitoring program in accordance with regulations adopted by the board and carry out all corrective measures specified by the Commissioner.~~~~
- ~~(ix) — At the completion of the coal ash fill project, and no later than 90 days after operations have ceased, the final cover must meet the requirement of at least 24 inches of compacted soil on the coal ash project area, except for those areas covered by structures, asphalt, concrete (including concrete containing coal ash), or other similar barriers to water infiltration. The upper six inches of this cover shall be able to support the growth of suitable vegetation.~~
- ~~(x) — The final surface of the coal ash fill area is graded and/or provided with drainage facilities in a manner that:
 - ~~(I) — Minimizes erosion of cover material (e.g., no steep slopes);~~
 - ~~(II) — Promotes drainage of precipitation falling on the area (e.g., prevents pooling);~~
 - ~~(III) — Provides a surface drainage system which is consistent with the surrounding area and in no way significantly adversely affects proper drainage from these adjacent lands; and~~
 - ~~(IV) — The operator must take other erosion control measures (e.g., temporary mulching or seeding, silt barriers) as necessary to control erosion of the site.~~~~
- ~~(xi) — Dust Control — The operator must take dust control measures as necessary to prevent dust from creating a nuisance or safety hazard to adjacent landowners or to persons engaged in supervising, operating, and using the site. The use of any oils or other chemicals (other than water) for dust suppression must be approved in writing beforehand by the Department.~~
- ~~(xii) — Prior to excavation, all bore holes drilled or dug during subsurface investigation of the site, piezometers, and abandoned wells which are either in or within 100 feet of the areas to be filled must be backfilled with a bentonite slurry or other sealant approved by the Commissioner to an elevation at least ten feet greater~~

than the elevation of the lowest point of the fill base (including any liner), or to the ground surface if the site will be excavated less than ten feet below grade.

- ~~(xiii) The fill area must not be located in a 100-year floodplain unless it is demonstrated to the satisfaction of the Commissioner that:
 - ~~(I) Location in the floodplain will not restrict the flow of the 100-year flood, nor reduce the temporary water storage capacity of the floodplain.~~
 - ~~(II) The fill area is designed, constructed, operated, and maintained to prevent washout of any solid waste.~~~~
- ~~(xiv) There must be installed on-site a permanent benchmark (e.g., a concrete marker) of known elevation.~~
- ~~(xv) New coal ash fill areas and lateral expansions shall not be located in wetlands, unless the owner or operator makes the applicable demonstrations to the Commissioner as referenced at subparagraph (2)(p) of Rule 0400-11-01-.04.~~
- ~~(xvi) A fill area must not be located in highly developed karst terrain (i.e., sink holes and caves).~~
- ~~(xvii) The coal ash fill project does not:
 - ~~(I) Cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; or~~
 - ~~(II) Result in the destruction or adverse modification of the critical habitat of endangered or threatened species.~~~~
- ~~(xviii) Notice in Deed to Property – Except for coal ash fills on federal, state or local government owned right of ways, the operator must ensure that, within 90 days of meeting final cover requirements and prior to the sale or lease of the coal ash fill area property, there is recorded, a notation on the deed to the property or on some other instrument which is normally examined during a title search that will in perpetuity notify any person conducting a title search that coal ash has been placed on the property.~~

3. A tire ~~Tire~~ storage facility, if: facilities.

An owner or operator of a tire storage facility must:

- (i) The ~~Not~~ operate a tire storage facility in a county where the county legislative body, ~~of a county that does not own or operate~~ owns or operates a permitted Class I, Class III or Class IV facility which is accepting waste tires, ~~complies with the notification requirement of part 2 of this subparagraph; and~~
- (ii) The facility is ~~constructed, operated, maintained and closed~~ Construct, operate, maintain, and close the facility in a manner consistent with items (2)(k)3(i)(I) and (II) of Rule 0400-11-01-.04;
- (iii) ~~and subparts 1(iii), (iv), (v), (vi), (vii), (x), (xi), (xiii), (xiv), (xvi), (xvii), (xviii), (xix), (xx) and (xxi)~~ Comply with items 1(i)(II), (III), (IV), (V), (VI), (IX), (X), (XII), (XIII), (XVI), and (XVII) of this subparagraph;
- (iv) ~~Provide, properly maintain, and locate fire suppression equipment capable of extinguishing a tire fire, such as fire extinguishers, and make them continuously available in sufficient quantities to control accidental tire fires that may occur; and~~
- (iii)(v) ~~Contracts~~ As a condition to begin operating or to continue to operate, establish

~~and maintain a valid contract for the disposal or recycling of the shredded tires have been established.~~

4. ~~A convenience center, if: Convenience centers.~~

~~An owner or operator of a convenience center must:~~

~~(i) The operator complies with the notification requirements of Part 2 of this subparagraph;~~

~~(ii)(i) The operator attaches to his Attach as a part of the notification required by subpart (a)2(iii) of this paragraph all attachments required at pursuant to part (2)(b)1 of Rule 0400-11-01-.10; and~~

~~(iii)(ii) The facility is designed and operated Design and operate the facility in compliance with Rule 0400-11-01-.10.~~

5. ~~A transfer station, if: Transfer stations.~~

~~(i) The operator complies with the notification requirements of Part 2 of this subparagraph; and (ii) The facility is constructed, operated, maintained, and closed in a manner consistent with subparts 1(ii), (iii), (iv), (v), (vi), (vii), (viii), (ix), (x), (xi), (xii), (xiii), (xiv), (xv), (xvi), (xviii), (xix), (xx), (xxi) and (xxiv) of this subparagraph An owner or operator of a transfer station must comply with items 1(i)(I) through (XV) and (XVII) of this subparagraph.~~

6. ~~A land Land application facility, if: facilities.~~

~~An owner or operator of a land application facility must:~~

~~(i) The operator complies with the notification requirements of subparagraph (b) of this paragraph;~~

~~(ii)(i) The operator attaches to his Attach as a part of the notification required by subpart (a)2(iii) of this paragraph all attachments required at subparagraph (1)(c) of Rule 0400-11-01-.13; and~~

~~(iii)(ii) The facility is designed and operated Design and operate the facility in compliance with Rule 0400-11-01-.13.~~

7. ~~A Tier One composting facility, if: facilities.~~

~~An owner or operator of a Tier One composting facility must:~~

~~(i) The operator complies with the notification requirements of subparagraph (b) of this paragraph;~~

~~(ii)(i) The operator attaches to his Attach as a part of the notification required by subpart (a)2(iii) of this paragraph all attachments required in the Composting Facility Operation Plan by pursuant to subpart (2)(a)2(vii) of Rule 0400-11-01-.11; and~~

~~(iii)(ii) The facility is designed and operated Design and operate the facility in compliance with Rule 0400-11-01-.11.~~

~~(b)(c) The An owner or operator of a facility deemed to have seeking a written authorization from the Commissioner pursuant to this paragraph to operate a facility or activity listed in parts (b)1 through 7 of this paragraph a permit by rule must notify the Department Commissioner in accordance with the requirements of this subparagraph.~~

~~1. No person shall begin operation on a new facility without having submitted notification and received written approval from the Commissioner.~~

2.1. Notification must be submitted on forms provided by the Department and completed as per the accompanying instructions.

2. ~~#~~ Notification must include, but shall not necessarily be limited to, the following information:

- (i) The processing and disposal activities conducted and the types of solid wastes handled;
- (ii) The name, mailing address, and location of the facility;
- (iii) The name, mailing address, and telephone number of the applicant and, if the applicant is a government agency, corporation, company, or partnership, that of the process agent or other contact person;
- (iv) If different from the operator, the name, mailing address, and telephone number of the landowner, along with a signed letter from such owner to the Department allowing access to the property for purposes of inspection;
- (v) A map (e.g., U.S.G.S. 7.5 minute topographic map) which clearly indicates the location of the facility;
- (vi) A written narrative must be submitted that describes:

(I) how ~~How~~ the facility/operation owner or operator will comply with all applicable standards listed in part 1 of this the requirements of subparagraph (b) of this paragraph, and Rules 0400-11-01-.10, 0400-11-01-.11, and 0400-11-01-.13, as applicable;

(II) The maximum capacity for each unit, storage area or disposal area; and

(III) any ~~Any~~ other information deemed necessary by the Commissioner; and

- (vii) A design plan attached indicating boundaries of the site and all on-site appurtenances.

~~3. The notification under part 2 of this subparagraph shall be revised within 30 days of a change in facility ownership with new information as necessary but at a minimum to include changes to subparts 2(iii) and (iv) of this subparagraph along with payment of the fee specified at part (2)(b)6 of Rule 0400-11-01-.07.~~

(e)(d) Duty to Comply - ~~The permittee~~ An owner or operator deemed permitted under this paragraph must comply with all conditions of this permit-by-rule requirements applicable to the facility or activity operated under this paragraph, unless otherwise authorized by the Department Commissioner in writing. Any ~~permit-by-rule~~ noncompliance constitutes a violation of the Act and is grounds for the assessment of civil penalties by the Commissioner.

(e) Revocation of the Authorization to Operate

1. The authorization to operate issued by the Commissioner pursuant to subparagraph (a) of this paragraph may be revoked for a cause identified in part 2 of this subparagraph and only according to the procedures set forth in part 3 of this subparagraph.

2. Causes for Revocation.

The following are causes for revoking the authorization to operate under this paragraph:

- (i) The owner or operator of facilities or activities operating on the effective date of these rules fails to comply with part (a)1 of this paragraph by either not submitting a complete updated notification satisfying the requirements of subparagraph (c) of this paragraph, or not submitting it by the date required by the Commissioner.
- (ii) Noncompliance by the owner or operator with any requirement of this paragraph which the Commissioner deems to be significant and/or repeated;
- (iii) Failure of the owner or operator to disclose relevant or truthful facts in the notification information submitted pursuant to subparagraph (c) of this paragraph;
- (iv) A determination made by the Commissioner that continued operation for the facility or activity endangers human health or the environment that can only be effectively protected by revoking the authorization; and
- (v) The owner's or operator's failure to pay any applicable fee owned to the Department.

3. Procedures

- (i) When the Commissioner receives information, such as complaints or inspection findings, indicating that revoking the authorization may be in order, the Commissioner will determine whether or not one or more of the causes listed in part 2 of this subparagraph exist;
- (ii) If the Commissioner determines cause exists and tentatively decides to proceed to revoke the authorization to operate under this paragraph, the Commissioner will, pursuant to T.C.A. § 4-5-320, give the owner and operator notice by mail of facts or conduct that warrant the intended action and will give the owner and operator an opportunity to show compliance with this paragraph;
- (iii) After completing all the requirements of T.C.A. § 4-5-320, the Commissioner will decide whether or not to revoke the authorization to operate by issuing an Order to the owner or operator; and
- (iv) The Commissioner's decision to revoke the authorization to operate may be appealed as set forth in T.C.A. § 68-211-113.

(f) Denial of an Authorization to Operate

The Commissioner may deny an owner or operator an authorization to operate a facility or activity if:

1. The owner or operator has had any previously issued authorization to operate revoked for cause, unless the Commissioner is satisfied that the owner or operator is willing and able to operate the facility or activity in compliance with the requirements of this paragraph; or
2. The Commissioner believes the operation of the facility or activity will endanger human health or the environment.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (a) of paragraph (4) of Rule 0400-11-01-.02 Permitting of Solid Waste Storage, Processing, and Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

- (a) Preliminary Notices - Within 30 days after the date of receipt, the Commissioner shall issue a preliminary public notice under subparagraph (e) of this paragraph

for each Part I permit application received. Within one year after the date of receipt of the Part I permit application, the applicant shall submit either the Hydrogeological Report or Engineering Plans required to satisfy the Part II permit application. If within 1 year of the date of receipt of the Part I permit application the Commissioner has not received either the Hydrogeological Report or Engineering Plans, the Commissioner will require the applicant to resubmit the Part I permit application at the time of the submittal of the Engineering Plans.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (k) of paragraph (4) of Rule 0400-11-01-.02 Permitting of Solid Waste Storage, Processing, and Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

- (k) Appeals - ~~If, in his The Commissioner's final permit decision under subparagraph (i) of this paragraph, the Commissioner denied the permit or issued it subject to conditions with which the permit applicant disagrees, the applicant may be appealed the decision to the Board as set forth in T.C.A. § 68-211-113. If the Commissioner fails to take any action on a permit application within 45 days after it was submitted to him, the permit applicant may appeal to the Board as set forth in T.C.A. § 68-211-113.~~

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Part 1 of subparagraph (b) of paragraph (1) of Rule 0400-11-01-.03 Requirements for Financial Assurance is amended by deleting it in its entirety and substituting instead the following:

1. The requirements of this rule apply to:
 - (i) ~~disposal~~ Disposal facilities in operation on March 18, 1990 or thereafter;
 - (ii) Recovered materials processing facilities to the extent required by item (1)(b)3(xxii)(VII) of Rule 0400-11-01-.02; and
 - (iii) Solid waste processing facilities to the extent required by item (2)(b)1(i)(XX) of Rule 0400-11-01-.02.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Paragraph (2) of Rule 0400-11-01-.03 Requirements for Financial Assurance is amended by deleting it in its entirety and substituting instead the following:

(2) Closure/Post-Closure Care Plan

- (a) General Requirements - Operators of facilities must submit a closure/post-closure care plan to the Department, obtain approval of the plan, and amend the plan when necessary, as set forth in this paragraph.
- (b) Contents of Plan
 1. The closure/post-closure plan must identify the steps necessary to completely or partially close the facility at any point during its intended operating life and to completely close the facility at the end of its intended operating life, and must identify the activities which will be carried on after closure and the frequency of these activities. For facilities being developed or to be developed according to a phased development plan, the closure/post-closure care plan must address each parcel separately as well as the whole.
 2. The closure/post-closure plan must include, at a minimum:
 - (i) A description of how and when the facility will be partially closed, if applicable, and finally closed. If minimum closure areas are used, they must be delineated in the engineering plans. The description must identify how the applicable closure

standards of paragraph (8) of Rule 0400-11-01-.04 will be met. It must also include an estimate of the expected year of closure and a schedule for completing the steps of final closure;

- (ii) A description of the planned ground and surface water monitoring and other monitoring and maintenance activities and frequencies at which they will be performed. The description must identify how the applicable post-closure care standards of paragraph (8) of Rule 0400-11-01-.04 and the applicable Ground Water Protection/Monitoring Standards of paragraph (7) of Rule 0400-11-01-.04 will be met; and
- (iii) The name, address, and phone number of the person or office to contact about the facility during the post-closure care period. This person or office must keep an updated closure/post-closure plan during the post-closure care period.
- (iv) An itemized estimate in current dollars of the cost based on hiring a third party to perform the closure and post-closure care activities.
- (v) A description of the planned uses of the property during the post-closure care period.

(vi) For Class I and Class II facilities, a description of recommended activities during long term custodial care to inspect, monitor, and maintain the facility. Facilities which utilize synthetic components in the final cover system must include an analysis of the life cycle of such components.

- 3. In the closure portion of his plan, the operator must address the closure of active portions and future active portions of the facility. In the post-closure care portion of his plan, the operator must address the post-closure care of closed portions, active portions, and future active portions of the facility. If a facility which was in operation on March 18, 1990 closes prior to the date the closure/post-closure care plan is to be submitted, the plan need address only the post-closure care of closed portions of the facility provided that the closure is in accordance with applicable rules.

(c) Resubmittal of Plan – All Class I and Class II facilities must submit a new closure/post-closure care plan every 10 years from the date of the original permit or most recent permit expansion. The resubmittal of plan will be processed as a minor modification to the facility and must comply with subparagraph (b) of this paragraph. At minimum it must include:

- 1. Itemized closure/post-closure cost estimates must be adjusted by recalculating the maximum closure/post-closure amounts in current dollars and taking into account any design changes, new monitoring points and changes in materials.
- 2. The phased development plan must be updated and reconciled with the closure/post-closure cost estimate.
- 3. Minimum closure areas must be revised or added to reflect planned partial closure of the facility.
- 4. A separate itemized cost estimate for long term custodial care activities. This cost estimate is not to be included in the financial assurance amount for the facility.

(e)(d) Amendment of Plan - The approved closure/post-closure care plan may be amended at any time during the active life of the facility or during the post-closure care period as set forth in this subparagraph.

- 1. The operator may request to amend the plan to alter the closure requirements, to alter the post-closure care requirements, or to extend or reduce the post-closure care period based on cause. The request must include evidence demonstrating to the satisfaction of the Commissioner that:

- (i) The nature of the facility makes the closure or post-closure care requirement(s) unnecessary; or
 - (ii) The nature of the facility supports reduction of the post- closure care period; or
 - (iii) The requested extension in the post-closure care period or alteration of closure or post-closure care requirements is necessary to prevent threats to human health and the environment.
2. Such plan amendments shall be processed as modifications to the permit. However, the Commissioner may decide to modify the plan if he deems it necessary to prevent threats to human health and the environment. He may extend or reduce the post-closure care period based on cause or alter the closure or post-closure care requirements based on cause. However, no such modifications shall be initiated until the operator has been notified of such proposed action and provided the opportunity to be heard on the matter.
 3. The cost estimate of the approved closure/post closure care plan must be adjusted annually for inflation. Such inflation adjustment shall not be considered an amendment of the plan.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (t) of paragraph (2) of Rule 0400-11-01-.04 Specific Requirements for Class I, II, III, and IV Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

(t) ~~Annual and Triennial Engineering Report Future Planning – All operators of Class I disposal facilities within the state of Tennessee shall file with the Department, by May 1st of every year, an estimate of the remaining life of their site. This report shall include the original usable acreage of the site and the remaining unused portion at the time of the report. Where measuring facilities are available, an average monthly weight (or volume) estimate of the incoming waste shall be supplied. The Department shall have final determination of the accuracy of the estimate. If the operator plans to operate a new landfill, a suitable site for the new facility shall be selected at least twelve months before the estimated date for expiration of the operating life of the existing facility, and as applicable, design and construction plans shall be submitted at least six months prior to the estimated date for expiration of the operating life of the existing facility to assure continued operation in an approved facility or site.~~

1. All operators of Class I disposal facilities within the state of Tennessee shall file with the Department, by May 1st of every year, an annual engineering report which shall include:

(i) A current topographic survey of the active portion of the disposal facility (same scale as approved plans) performed by a qualified land surveyor duly authorized under Tennessee law to conduct such activities. This should be superimposed on the approved contours;

(ii) Calculations on the current constructed capacity of the disposal facility, in cubic yards, and the total remaining volume within the currently constructed cells to be filled, in cubic yards, along with the total remaining permitted cubic yards;

(iii) The first Annual Engineering Report submitted should include all minor modifications to the facility since the most recent permit issuance;

(iv) A report showing the quantity of leachate collected in gallons: for treatment, for disposal, recirculation, or other management method on a monthly basis for the reporting year. The report must name the location and method of leachate treatment and disposal. A summary of any leachate management system cleanouts performed since the last Annual Engineering Report must also be provided.

(v) A report of amounts and types of Special Wastes disposal relative to normal solid waste disposed at the facility since the last Annual Engineering Report, presented in the form of a ratio; and

(vi) A notarized statement that, to the best of the knowledge of the owner or operator, the information contained in the annual engineering report is true and accurate.

2. All operators of Class II facilities in the state of Tennessee shall file with the Department, beginning May 1, 2019, a triennial engineering report. This report shall include:

(i) A current topographic survey of the active portion of the disposal facility (same scale as approved plans) performed by a qualified land surveyor duly authorized under Tennessee law to conduct such activities. This should be superimposed on the approved contours;

(ii) Calculations on the current constructed capacity of the disposal facility, in cubic yards, and the total remaining volume within the currently constructed cells to be filled in cubic yards, along with the total remaining cubic yards;

(iii) The first Triennial Engineering Report submitted should include all minor modifications to the facility since the most recent permit issuance; and

(v) A notarized statement that, to the best of the knowledge of the owner or operator, the information contained in the annual engineering report is true and accurate.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Item (II) of subpart (i) of part 4 of subparagraph (a) of paragraph (7) of Rule 0400-11-01-.04 Specific Requirements for Class I, II, III, and IV Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

(II) The ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents and other monitoring parameters in ground water samples. ~~Ground water samples shall not be field-filtered prior to laboratory analysis.~~

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Subpart (ii) of part 3 of subparagraph (c) of paragraph (8) of Rule 0400-11-01-.04 Specific Requirements for Class I, II, III, and IV Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

(ii) At Class III and Class IV facilities, unless the Commissioner determines that a greater depth is needed to achieve the general performance standard of subparagraph (a) of this paragraph, the depth of final cover shall be at least 30 inches of compacted soil. The final cover consists of an 18 inch ~~low permeability compacted soil~~ layer with a maximum hydraulic conductivity of 1×10^{-5} cm/s overlain by a 12 inch protective layer.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Part 8 of subparagraph (g) of paragraph (8) of Rule 0400-11-01-.04 Specific Requirements for Class I, II, III, and IV Disposal Facilities is amended by deleting it in its entirety and substituting instead the following:

8. If the ~~dump closed has been closed on-site after an order has been issued by the Commissioner or Board and become final pursuant to T.C.A. § 68-211-113 or 4-5-322~~ owner or operator fails to timely comply with part 7 of this subparagraph, the Commissioner may present for recording in the office of the county register an instrument that will be in the chain of title that will in perpetuity notify any person conducting a title

search that the land has been used as a disposal facility site. Such notice may include the following:

- (i) The name of the person who owns the property upon which the dump is located;
- (ii) The book and page number in which the deed to such property is recorded; and
- (iii) A description of the wastes believed to be disposed on such property.

Authority: T.C.A. §§ 68-211-101 et seq. and 4-5-201 et seq.

Part 4 of subparagraph (c) of paragraph (3) of Rule 0400-11-01-.07 Fee System for Non-Hazardous Disposal and Certain Non-Hazardous Processors of Solid Waste is amended by deleting it in its entirety and substituting instead the following:

- 4. Reserved Coal Ash Fill Area ~~————— \$ 3,000~~

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (b) of paragraph (6) of Rule 0400-11-01-.07 Fee System for Non-Hazardous Disposal and Certain Non-Hazardous Processors of Solid Waste is amended by deleting it in its entirety and substituting instead the following:

- (b) Permit application shall be acted upon (issued or denied) by the Department within the following time after the application is certified to be complete:
 - 1. Disposal Facility
 - (i) Class I 270 days
 - (ii) Class II 270 days
 - (iii) Class III 240 days
 - 2. Processing Facility
 - (i) Permit By Rule 90 days
 - (ii) Compost Facility 120 days
 - 3. Major Modification
 - (i) Regulatory Requirement 180 days
 - (ii) Application
 - (I) Plans Only 240 days
 - (II) Hydrogeologic 270 days
 - 4. Minor Modifications
 - (i) Engineering Review 90 days
 - 4.5. Waste Evaluation 30 days

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

Part 1 of subparagraph (b) of paragraph (2) of Rule 0400-11-01-.10 Convenience Centers / County Public

Collection Receptacles is amended by deleting it in its entirety and substituting instead the following:

1. Convenience centers must meet the permit by rule requirements at ~~subpart (2)(a)4 part (2)(b)4~~ of Rule 0400-11-01-.02. The operator must make attachments to the notification as follows:
 - (i) The operator attaches a written narrative to his notification describing the specific manner in which the facility complies with paragraph (3) of this rule.
 - (ii) A design plan attached indicating boundaries of the site and all appurtenances.
 - (iii) A site location map is submitted on a USGS Topo map.

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

Part 7 of subparagraph (b) of paragraph (1) of Rule 0400-11-01-.11 Requirements for Compost and Composting Facilities is amended by deleting it in its entirety and substituting instead the following:

7. Tier One composting facilities may apply for a permit by rule pursuant to part ~~(2)(a)7 (2)(b)7~~ of Rule 0400-11-01-.02.

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (c) of paragraph (1) of Rule 0400-11-01-.13 Requirements for Land Application Facilities is amended by deleting it in its entirety and substituting instead the following:

- (c) Notification Requirements – The operator must comply with the notification requirements of ~~(2)(a)4 part (2)(b)6~~ of Rule 0400-11-01-.02. The operator must make attachments to the notification as follows:
 1. The operator attaches a written narrative to his notification describing the specific manner in which the facility complies with paragraph (2) of this rule.
 2. The operator attaches any sampling, monitoring, or other plans required by these rules or by the Commissioner.
 3. The operator of an existing permit-by-rule land application facility must modify the notification if:
 - (i) Adding a waste stream from a new generator, or a waste stream from an existing generator which has not been previously approved for land application at that site; or
 - (ii) Adding new acreage to the land application operations.

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

Subparagraph (g) of paragraph (2) of Rule 0400-11-01-.13 Requirements for Land Application Facilities is amended by deleting it in its entirety and substituting instead the following:

- (g) ~~Reserved. Duty to Comply—The permittee must comply with all relevant notification and permit-by-rule requirements, unless otherwise authorized in writing by this Department. Any permit-by-rule condition noncompliance, except as otherwise authorized by the Department, constitutes a violation of the Act and is grounds for enforcement action, or for termination of the permit-by-rule, revocation and reissuance, or modification.~~

Authority: T.C.A. §§ 68-203-101 et seq., 68-211-101 et seq. and 4-5-201 et seq.

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Marty Calloway (Petroleum Business with at least 15 Underground Storage Tanks)					
Stacey Cothran (Solid/Hazardous Waste Management Industry)					
Kenneth L. Donaldson (Municipal Government)					
Dr. George Hyfantis, Jr. (Institution of Higher Learning)					
Richard "Ric" Morris (Single Facility with less than 5 Underground Storage Tanks)					
Alan M. Leiserson Environmental Interests					
Jared L. Lynn (Manufacturing experienced with Solid/Hazardous Waste)					
David Martin (Working in a field related to Agriculture)					
Beverly Philpot (Manufacturing experienced with Underground Storage Tanks/Hazardous Materials)					
DeAnne Redman (Petroleum Management Business)					
Mayor Howard Bradley (County Government)					
Mark Williams (Small Generator of Solid/Hazardous Materials representing Automotive Interests)					
Chuck Head Commissioner's Designee, Dept. of Environment and Conservation					
Jimmy West Commissioner's Designee, Dept. of Economic and Community Development					

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Underground Storage Tanks and Solid Waste Disposal Control Board on 02/07/2018, and is in compliance with the provisions of T.C.A. § 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 10/26/17

Rulemaking Hearing(s) Conducted on: (add more dates). 12/18/17

Date: February 7, 2018

Signature: _____

Name of Officer: Jared L. Lynn

Title of Officer: Chairman

Subscribed and sworn to before me on: _____

Notary Public Signature: _____

My commission expires on: _____

Agency/Board/Commission: Underground Storage Tanks and Solid Waste Disposal Control Board

Rule Chapter Number(s): 0400-11-01

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Herbert H. Slatery III
Attorney General and Reporter

Date

Department of State Use Only

Filed with the Department of State on: _____

Effective on: _____

Tre Hargett
Secretary of State

Public Hearing Comments

One copy of a document that satisfies T.C.A. § 4-5-222 must accompany the filing.

Comment 1: While it is possible that groundwater monitoring samples could include some geologic solids not related to landfill leaks, that should be accounted for by slow rate sampling, proper well installation, and by unfiltered sampling at an upgradient well. In the U.S. EPA "RCRA Groundwater Monitoring: Draft Technical Guidance" dated November 1992, EPA states "The Agency also realizes that data generated from unfiltered samples may result in higher concentrations of metals detected in ground-water samples at some facilities. Because background samples will also be unfiltered, however, false indications of contamination should be minimized. In all cases, owners and operators should ensure that all samples used in a statistical test are collected using the same procedures."

The Washington State Department of Ecology has also published "Standard Operating Procedures for Collecting Groundwater Samples for Metals Analysis from Monitoring Wells." See Exhibit B, attached. The manual states that:

Research has shown that colloidal-scale particles (up to 10 microns in diameter) can be mobile in the groundwater environment under normal fluid velocities (Puls et al., 1991; Puls and Powerll, 1992). It is important to use sampling procedures that account for colloidal transport of metals, particularly if attempting to characterize contaminant mobility at a project site. Filtering such particles out prior to analysis can introduce a significant negative bias into the reported concentrations (i.e. the lab will report metal concentrations that are lower than the in situ groundwater condition). As a result, standard industry practice is to leave most groundwater metals samples unfiltered, and focus on controlling artificial or "induced" turbidity effects caused by poor well design or excessive pumping rates.

In a white paper titled "Ground Water Sampling for Metals Analyses" by Robert W. Puls and Michael J. Barcelona, they state: "If the purpose of the sampling is to determine possible mobile contaminant species, the unfiltered samples should be given priority." Additionally, they state, "Filtration of ground-water samples for metal analyses will not provide accurate information concerning the mobility of metal contaminants."

The Southern Environmental Law Center encourages DSWM not to make the proposed change that would permit filtration of groundwater samples, so that sampling will follow best protocols and will remain accurate.

Response: Concern over the occurrence of suspended solids in water samples and the potential impact they have on laboratory analysis and regulatory compliance has been the subject of research and regulatory development for several decades in the areas of waste water treatment, solid waste management and remediation. Early regulatory positions held that samples should be unfiltered due to potential for error (US Environmental Protection Agency – USEPA, 1989). However, a Kent County, Delaware Circuit Court decision in 1992 held that the USEPA had acted arbitrarily and capriciously by calculating elevated hazardous rankings for a municipal landfill based only on unfiltered groundwater samples. Later, the USEPA (1994, 2002, 2004) and others [The Boing Company (1998), Saar (1999) and the United States Geologic Survey (USGS, 1999)] indicate the potential benefit of filtering (both in the field during sampling and in the lab prior to analysis) to limit the negative effects of excessive suspended solids.

The Department has produced draft guidance for monitoring inorganics constituents in groundwater and the use of filtering methodologies for obtaining representative samples. Within this draft guidance, the Department recognizes that the subject of representative groundwater sampling in circumstances of elevated turbidity and filtering of samples to achieve a more representative result has been the subject of great interest and controversy in the community of environmental regulators and regulated organizations. The Department seeks to clarify its position on the topic through the continued revision and development of this guidance with

stakeholder input in 2018.

At many permitted and regulated facilities throughout Tennessee, the water bearing units that are monitored are fine-grained alluvium and residuum of weathered bedrock. These formations are composed of a high percentage of fine-grained (silt- and clay-sized) materials in both texturally heterogeneous and homogenous distributions. Solids do not generally pass through water-bearing deposits of these types because the porosity and permeability are low. So it is expected that “representative” groundwater will not contain appreciable suspended solids, and the sample should be relatively clear. However, groundwater well construction technology (including that for monitoring wells) is not particularly well suited for the reliable retrieval of water that is free of the fine-grained solids that are the predominant composition of these formations. Depending on specific geology and stratigraphy it can be difficult to retrieve representative (turbidity free) samples from monitoring wells installed in these fine-grained formations.

Elevated turbidity in groundwater samples resulting from uncontrollable formation and well construction/development effects can result in “artificially” elevated inorganic compound concentrations, through the sample preservation and preparation regimen that may not be representative of groundwater conditions. Reconsideration of well design (and well replacement), well development (and well redevelopment), and purging/sampling method (using low-flow approaches), can help to yield samples that are representative, low-turbidity samples. Occasionally as well though, these approaches are ineffective at reducing turbidity. In these cases, while recognizing and accounting for related sources of error, samples can be filtered to remove excess suspended solids to achieve more representative groundwater samples (relative to turbidity) and analytical results that more reliably reflect actual inorganic groundwater chemistry conditions.

Most current sources and guidance concerning the practice of sample filtering conclude that the practice of filtering is acceptable when it is appropriate (i.e. turbidity exceeds the 5 NTU threshold and the sampling plan recognizes and accounts for the potential sources of error). These also indicate that field filtering with in-line equipment that reduces the exposure to the atmosphere (that might cause geochemical changes) is preferable. That said, the current Federal and State of Tennessee solid waste management regulations indicate that groundwater samples shall “not be filtered in the field” [40 CFR 258.53(b), 0400-11-01-.04(7), respectively], which is the reason for this proposed rule change.

Sample filtering is permitted by regulatory guidance in many states nationwide for both solid waste and remediation compliance areas. Review of existing guidance nationwide indicates that filtered samples are considered to be representative of groundwater (without specific use limitations) for the purpose of establishing and monitoring compliance conditions. Most published guidance documents establish parameters for deciding that filtering is “acceptable” and provide for protocols of application. The position appears to be broadly ubiquitous across environmental programs including underground storage tank, solid waste, and CERCLA applications. States where filtered groundwater samples are regarded as representative include but are not limited to Indiana, New Jersey, New York, Florida, Connecticut, Texas and California. Notably, the State of Ohio recognizes filtering as acceptable and representative for compliance purposes in regulatory programs but specifically excludes their solid waste program. Presumably that is because RCRA solid waste rules still contain language preventing the use of field filtering despite the fact that USEPA interpretation and industry-wide research and practice is otherwise.

In the event that turbidity levels in groundwater samples (whether from wells or springs) indicate suspended solids compromise the representative nature of the groundwater sample, the permittee shall be responsible to undertake measures to rectify the matter in coordination with the respective Division EFO, for the purpose of achieving analytical results considered to be representative of hydrogeologic conditions.

In these circumstances, Permit holders shall consider in cooperation with their respective EFO:

- Geologic formation characteristics and whether the monitoring well design is appropriate for the location being monitored
- Whether the monitoring well was developed properly when the well was installed and

- whether redevelopment is necessary or might be beneficial
- Whether the well purging and sampling technology being employed is appropriate for collecting representative samples given formation and well construction characteristics
- Whether surface/spring conditions support turbid free sample collection
- Whether sample filtering might be an appropriate consideration for achieving representative results given the potential sources of error.

The permit holder may determine that sample filtering should be selected to reduce suspended particulates and yield results considered to be more representative of formation water. In this event, the permit holder shall demonstrate to the EFO that sample filtering is appropriate given known hydrogeologic conditions, nature of groundwater chemistry, efforts made to reduce suspended solids in samples, the nature of all possible pollutants, and the probable naturally-occurring inorganic compounds specific to the location and region. The permittee shall not filter samples without the specific approval of the EFO.

Samples shall not be filtered when:

- Samples are taken from private water supply sources
- Samples are taken for organics analysis
- The subject geologic formation has characteristics of high-flow regimes that might allow suspended solids to be transmitted through the subsurface
- Field turbidity measurements are below 5 NTUs (or another threshold approved by the Division)
- Groundwater chemistry is such that the sampling and filtering process causes dissolved inorganic compounds to precipitate from solution and be filtered from the sample

If the permittee and EFO agree that sample filtering shall be employed at any site, the following shall be observed:

- Samples shall be filtered in the field using in-line air-free sampling techniques or other approved methods. Samples chosen for filtration shall not be laboratory filtered without EFO approval.
- Filtering shall be conducted in accordance with laboratory methods for analysis of Total Suspended Solids using 0.45 micron filter media.
- When appropriate as determined by the EFO, a Baseline Monitoring Period of four sampling events shall be conducted with both filtered and non-filtered samples for the purpose of comparison, conducting required statistical analysis, establishing background, and understanding the physical, chemical and regulatory effects of the filtering regimen.
- At the discretion of the EFO duplicate samples for total (unfiltered) analysis may be required during monitoring events that take place beyond the period of Baseline monitoring.
- Additional monitoring locations and/or analytical parameters may be required in conjunction with the filtered sample analyses for use in evaluating site-wide conditions and understanding naturally-occurring conditions.
- Statistical analysis of both filtered and non-filtered analytical results shall be required, as deemed appropriate, and in accordance with Rule 0400-11-01-.04(7). Statistically significant exceedances of inorganic compounds compared to background conditions shall be cause for consideration of potential facility impacts and Assessment Monitoring programs. The EFO shall have discretion to interpret analytical data and its application under Rule 0400-11-01-.04(7).

The Board has concluded that in certain cases as discussed above, field filtering of groundwater samples is appropriate to obtain a representative sample. The Board concludes that the current regulations stating that field filtering of samples is never allowed is overreaching. The Department will finalize detailed technical guidance with extensive stakeholder input to dictate when field filtering is appropriate.

Comment 2: The federal regulation governing landfill closure criteria states that, “(a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and

erosion. The final cover system must be designed and constructed to: (1) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less." 40 C.F.R. §258.60. The federal regulation governing the design and operation of landfills states that, "the lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec." 40 C.F.R. § 264.301. Accordingly, the cover must be equally as protective as the bottom liner, or have a permeability no greater than 1×10^{-5} cm/s, whichever is less. A liner with hydraulic conductivity of 1×10^{-7} cm/sec allows liquid to flow through it at a rate that is one hundred times slower than a liner that has a leakage rate of 1×10^{-5} cm/sec. The proposed change is thus not compliant with 40 C.F.R. § 258.60, and is insufficient to be safe for the environment and people.

The Southern Environmental Law Center urges SWDM to require landfill covers to have hydraulic conductivity of at least 1×10^{-7} cm/sec.

Response: The commenter incorrectly references 40 CFR Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, And Disposal Facilities. Additionally, the commenter references 40 CFR 258, Criteria for Municipal Solid Waste Landfill.

This rule change affects only non-hazardous Class III construction and demolition landfills. Construction and demolition landfill are subject to the requirements of 40 CFR part 257, subparts A or B.

The current rules require Class III landfills to have a geologic buffer of 10 feet with maximum hydraulic conductivity of 1.0×10^{-5} cm/s or 5 feet of 1.0×10^{-6} cm/s. Therefore, at 1.0×10^{-5} cm/s, for a Class III facility, the cover is equally protective as the bottom liner, which consists of only the geologic buffer, unless the permit calls for more protective engineered features.

Comment 3: This comment suggest inserting the language below into: Part 3 of subparagraph (b) of Paragraph (1) of Rule 0400-11-01-.02, (VII), (page 8 of the proposed Division of Solid Waste Rule changes):

The closure cost estimate for the financial assurance for facilities operating under the Permit By Rule should be based on a closure plan for the facility.

A closure plan involving the activities required to close the facility by a third party should be required for all Permit By Rule permittees.

Prior to Closure:

The permittee shall prepare a closure plan involving treatment and disposal of permitted materials, decontamination and removal of equipment and third-party certification.

The closure plan shall be certified by a Professional Engineer.

Closure:

At the time of closure, TDEC will select a contractor to execute the closure plan.

The contractor shall prepare an inventory of the facility, contents, and equipment, and characterize all material to make a waste determination.

Upon approval from TDEC, the contractor shall execute the closure plan.

The contractor shall provide an independent, third party to certify the work.

Response: Currently, the owner/operator of a solid waste processing facility which has a solid waste storage capacity of 1000 cubic yards or greater shall file with the Commissioner a performance bond or equivalent cash or securities, payable to the State of Tennessee. Such financial assurance is intended to ensure that adequate financial resources are available to the Commissioner to ensure the proper operation, closure, and post closure care of the facility.

For permit-by-rule facilities, the applicant submits to the Department a closure cost estimate which the Department accepts or does not, based upon agreement or disagreement with the various itemized costs. The operator may appeal amount of financial assurance required by the Department to the Commissioner's as set forth in T.C.A. § 68-211-113.

The Board recognizes this comment as a relevant alternative to the current methodology and may consider this proposal in a future rulemaking after obtaining stakeholder input and public comment.

Comment 4: As indicated in our previous comments, dated April 21, 2017, TVA has concerns with the proposed addition of boron as a constituent in both Appendixes I (detection monitoring) and Appendix II (assessment monitoring). TVA agrees with TDEC that boron can be a constituent found in association with landfilled coal combustion residuals (CCR) waste and therefore may be appropriate for inclusion in the detection monitoring list (Appendix I). Because it is highly mobile, does not precipitate, and has a low affinity for soil particles, boron may be a leading indicator of potential releases from landfills, particularly CCR landfills, but it is not indicative of a threat to human health or the environment and it isn't an appropriate driver for initiating corrective action.

Boron is not warranted for inclusion in the assessment monitoring list (Appendix II) since it is generally non-toxic and has no health-based protection level. As you know, the assessment monitoring program serves a different purpose than the detection monitoring program. When an Appendix I constituent is detected at a statistically significant level above background, Appendix II assessment monitoring is triggered. The goal of assessment monitoring is to evaluate whether there are risks to human health associated with constituents in groundwater and to determine whether corrective action is necessary. Moreover, the unique chemical characteristics of boron, make it highly leachable and readily mobile, which makes it a potential indicator of the presence of CCR. However, it is not reflective of the migration of other constituents of concern, such as heavy metals, which are significantly less leachable and less likely to migrate. Thus, constituents on the Appendix II (assessment monitoring) list should include those constituents that may present a risk to human health, namely constituents for which risk-based MCLs have been developed. Statistically significant concentration increases in excess of the MCL indicate a potential risk and the need for groundwater corrective action. Because boron is not typically associated with risks to human health and has no federally-established MCL, it is inappropriate to use it as an indicator of potential risk and the need for corrective action.

Recall that EPA removed boron from Appendix IV (assessment monitoring) in the final rule. See 80 Fed. Reg. 21,404 (attached). While EPA included boron on the initial assessment monitoring list (Appendix IV) in the 2010 proposed version of the federal CCR Rule it was removed after EPA conducted a 2014 risk assessment. The justification for removing boron from the final Appendix IV (assessment monitoring) list was because it was already listed in Appendix III "and therefore will continue to be monitored throughout assessment monitoring" *Id.* Several other constituents, including aluminum, copper, iron, manganese, and sulfide also were removed from the Appendix IV (assessment monitoring) list because they have no current MCLs – a justification that applies to boron. Since there is no MCL for boron, the federal CCR Rule (and Tennessee's Solid Waste Processing and Disposal Rules) require that the background concentration be used as the Appendix IV (Appendix II) groundwater protection standard. Therefore, if added to that assessment list, any detection of boron above background during detection monitoring would represent an exceedance of the assessment monitoring Groundwater Protection Standard (GWPS) and would require implementation of corrective action. This essentially nullifies the intention of the rationale for the tiered monitoring process developed for the Federal CCR Rule.

This is especially troublesome as there is unlikely to be a risk to human health. The same logic applies to this rule and, therefore, the State of Tennessee should not include boron as an Appendix II (assessment monitoring) constituent.

In addition, at the national level, the regulated community has identified the potential inappropriate and costly implications associated with EPA adding boron to Appendix IV (assessment monitoring) to the CCR rule's groundwater monitoring program. Gradient has evaluated the technical considerations of adding boron to Appendix IV (assessment monitoring). In short, the Boron Report (attached) details the tremendous compliance costs that would be associated with adding boron to Appendix IV (driven primarily by the difficulty of treating boron) and explains why treatment of boron to background levels would be far more excessive than necessary to protect human health and the environment.

Notably, EPA has previously committed in the CCR Rule litigation settlement agreement to propose and take comment on adding boron to the list of Appendix IV (assessment monitoring) constituents. To date, EPA has not taken action on this commitment, and it is uncertain whether any such proposed rule would survive public scrutiny and become a final rule. For this reason, TVA believes it is premature to add boron as an Appendix II (assessment monitoring) constituent before EPA finalizes its determination, if at all.

Finally, TDEC has indicated that there is a regulatory need, pursuant to the Water Infrastructure Improvements for the Nation Act ("WIIN Act") for TDEC to develop, and seek EPA approval of, a state CCR permitting program that will enable TDEC to tailor controls for all CCR units, both landfills and impoundments, to reflect site-specific conditions. As the current proposed rulemaking does not comprehensively address CCR issues or impoundments, TDEC should refrain from even considering the addition of boron until they proceed with the development of a delegated state CCR permitting program.

Response: The Board has chosen to remove the proposed addition of Boron to Appendix I & II from this rulemaking.

Comment 5: The Appendix I and Appendix II lists have been in existence for a considerable period of time and seems to have been adequate for documenting any release of contaminants from a disposal facility. TDEC should provide scientific documentation for the need to add this new chemical to the list.

Earlier versions of the draft rules contained a footnote indicating that testing for Boron was applicable only to facilities subject to the EPA CCR rule or landfills that have received CCR material. The version that was included with the Notice of Public Hearing did not include the footnote. In a verbal statement at the Public Hearing, you indicated that the deletion of the footnote was in error and that the final rule would specifically note that testing for Boron is only required in association with CCR disposal.

If indeed Boron testing is only required for facilities where CCR has been disposed, it does not seem appropriate to Modify Appendices I and II to add Boron. Any monitoring for Boron should be addressed specifically in the EPA CCR rule or in a Tennessee specific CCR rule.

Response: The Board has chosen to remove the proposed addition of Boron to Appendix I & II from this rulemaking.

Comment 6: It may become even more essential in the years to come that Tennessee aligns state environmental regulations with the established federal minimum standards. By endeavoring to keep regulations in sync with the federal minimum standards, we eliminate confusion for the industrial workforce, business owners, regulators and the public at large. To be blunt we believe creating rules that go beyond the scope of the federal rules, is not good practice.

As you are aware, there are aspects of the proposed rule that are part of current challenges in federal court. Resolution on these points may continue to be unclear for some time. We would caution the division from pursuing these changes. Introducing inconsistent regulation can lead to

confusion and require substantial additional efforts to conform or correct, as we have recently experienced.

Response: The Board has chosen to remove the proposed addition of Boron to Appendix I & II from this rulemaking.

Regulatory Flexibility Addendum

Pursuant to T.C.A. §§ 4-5-401 through 4-5-404, prior to initiating the rule making process, all agencies shall conduct a review of whether a proposed rule or rule affects small business.

- (1) The type or types of small business and an identification and estimate of the number of small businesses subject to the proposed rule that would bear the cost of, or directly benefit from the proposed rule.

With this rule package, Class I landfills shall be required to submit annual engineering reports and resubmit their Closure/Post Closure plans every 10 years. The Department has identified two small businesses that own Class I landfills. Class II landfills will submit engineering reports every three years. The Department has identified three small businesses that own a Class II landfill.

Recovered Materials Processing Facilities engaged solely in the storage, processing and resale or reuse of recovered materials will have to notify the Department of operations. No permit or fees will be required.

- (2) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record.

Annual engineering reports and Closure/Post Closure Plans require the contracting of a qualified surveyor and/or professional engineer. All permitted landfills either have this expertise available on staff or engage in routine contracts with these individuals.

Annual reporting for recovered materials processing facilities requires no specialized skills or administrative costs.

- (3) A statement of the probable effect on impacted small businesses and consumers.

The proposed rules will have minimal effect on small businesses. Compared to current regulations the differences in permitting and regulatory oversight under these rule changes are minimal.

- (4) A description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and objectives of the proposed rule that may exist, and to what extent the alternative means might be less burdensome to small business.

There are no less burdensome, less intrusive or less costly alternatives to achieving the purpose and objectives of this proposed rule.

- (5) A comparison of the proposed rule with any federal or state counterparts.

Many Southeastern EPA Region 4 states have permit reissuance cycles for landfills, including Alabama and Florida, while this package requires only periodically reevaluation of the long term closure needs. Annual engineering reports are common throughout state programs. Currently, landfill permits in the State of Tennessee are valid for the life of the facility without any reissuance or recertification requirements. The changes to recovered material processing facilities are less restrictive than many neighboring states that require permits.

The majority of the other rules are considered housekeeping in nature.

- (6) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the proposed rule.

Recovered material processors will remain exempt from permitting requirements. Class III landfills were deliberately left out of this rule package as they are more often owned and/or operated by small businesses.

Impact on Local Governments

Pursuant to T.C.A. §§ 4-5-220 and 4-5-228 “any rule proposed to be promulgated shall state in a simple declarative sentence, without additional comments on the merits of the policy of the rules or regulation, whether the rule or regulation may have a projected impact on local governments.” (See Public Chapter Number 1070 (<http://publications.tnsosfiles.com/acts/106/pub/pc1070.pdf>) of the 2010 Session of the General Assembly)

The Board anticipates that these rules will have an impact on local governments that own Class I landfills.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to T.C.A. § 4-5-226(i)(1).

- (A)** A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

With these amendments to Board intends to:

- Make it easier obtain electronic submittal of documents submitted to the Department.
- Clarify that a permit by rule is an authorization to operate and that the owner or operator is deemed permitted to operate the facility or activity.
- Delete the petroleum contaminated soil exemption to prevent the inappropriate disposal of petroleum contaminated soils in solid waste landfills.
- Develop a “bright line” for determining which facilities are permit exempt Recovered Material Processing Facilities (“RMPF”), and which facilities qualify for a solid waste processing permit by rule. By incorporating a detailed permit exemption into the rules we better define whether a facility is first of all a RMPF, and whether it is exempt from permit requirements.
- Repeal the Coal Ash fill permit-by-rule. Due to the promulgation of the federal CCR disposal rules (40 CFR Part 257) the coal ash fill permit-by-rule is no longer an appropriate permit for public utilities. In addition, federal CCR beneficial use guidance creates framework for approving coal ash fill projects moving forward.
- Require permit applicants to resubmit the Part I permit application, if after 1 year the applicant has failed to submit either the Hydrogeological Report or the Engineering Plans (one piece of the Part II permit application).
- Require the resubmittal of the Closure/Post-Closure (CPC) plans every 10 years. Resubmittal of the CPC is important because in Tennessee permits are issued for life of the landfill. In being able to revisit the CPC of a landfill permit, DSWM will be able to update itemized cost estimates which are the basis for financial assurance. Owners will be provided an opportunity to evaluate best available technology for closure. Class I and Class II owners will also plan for the long term maintenance costs (custodial care) of the landfill beyond the Post-Closure period with no increase in required financial assurance. CPC resubmittal will be processed as a minor permit modification.
- Require a more detailed annual report to more effectively understand the status of landfill with respect to their planned phase of development, projected dates for cell openings and closings, remain cell capacity, and overall to ensure landfill are in compliance with their permitted fill progression. Class I landfills systems would report annually. Class II landfills would report every three years.
- Update rules to support changes in processes, procedures, and scientific understands for obtaining groundwater samples.
- Replace the undefined phrase “final cover consists of an 18 inch low permeability layer” with the more definitive “final cover consists of an 18 inch compacted soil layer with a maximum hydraulic conductivity of 1×10^{-5} cm/s.”
- Add a clarification requested by Attorney General’s Office regarding deed restrictions.

- (B)** A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

These rules are being promulgated under the authority of T.C.A. §§ 68-211-101 et seq.

- (C)** Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

Changes to Part I submittal requirements, closure/post-closure renewal, annual engineering reports, and cover

standards will apply to those entities that engage the operation and construction of landfills. The majority of Class I landfill are owned or operated by larger landfill corporations. The Board has reached out to these businesses through a series of stakeholder meetings and other channels and has explained the need for these changes. All changes are no more stringent that what these entities encounter in neighboring states.

To a lesser extent, some of these changes apply to government entities that continue to operate disposal facilities. During the stakeholder input phase, many items were stricken or lessened to accommodate the concerns of local governments.

The clarifications to the permit by rule language will apply to all existing permit holders, however, it will have no direct effect on these permits unless they are part of an enforcement action.

- (D) Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule or the necessity to promulgate the rule;

The Department is not aware of any opinions or judicial rulings that directly relate to this rule.

- (E) An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars (\$500,000), whichever is less;

The Board does not anticipate an increase or decrease in state revenues and expenditures and only a minimal increase in expenditure for local governments that still own solid waste landfills.

- (F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Nick Lytle
Division of Solid Waste Management
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor
Nashville, Tennessee 37243
Nickolaus.Lytle@tn.gov

- (G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Emily Urban
Assistant General Counsel
Office of General Counsel

- (H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

Office of General Counsel
Tennessee Department of Environment and Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
(615) 532-0108
Emily.Urban@tn.gov

- (I) Any additional information relevant to the rule proposed for continuation that the committee requests.

The Board is not aware of any additional relevant information requested by the committee.