

Chapter 0400-11-01
Solid Waste Processing and Disposal

Amendments

Rule 0400-11-01-.01 Solid Waste Disposal Control System: General is amended by a new paragraph (7) following the current paragraph (6) to read as follows:

(7) Conditional Exemptions.

Soil that meets the criteria of Category 1 or Category 2 soil established in paragraph (2) of Rule 0400-15-04-.01 and that is used outside the area of contamination, as defined at subparagraph (1)(e) of Rule 0400-15-01-.02, from which the soil was removed and is used in compliance with all requirements of Rule 0400-15-04-.01 is not subject to regulation under this chapter.

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

Chapter 0400-15-04
Use of Soil Containing a Hazardous Substance

New Rules

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0400-15-04-.01 Uses of Soil Containing a Hazardous Substance Excavated from VOAP Sites

0400-15-04-.01 Uses of Soil Containing a Hazardous Substance Excavated from VOAP Sites.

(1) Purpose, applicability, and definitions.

- (a) The purpose of this rule is to minimize the risks to public health, safety, and the environment when soil categorized as Category 2 soil in accordance with subparagraph (2)(b) of this rule is or has been excavated, at sites participating in the Brownfields Projects Voluntary Cleanup Oversight and Assistance Program (VOAP), and used outside the area of contamination from which the soil was removed in compliance with this rule.
- (b) Unless otherwise defined in this subparagraph, the definitions found in Rule 0400-15-01-.02 shall apply when those terms are used in this chapter. In addition, when used in this chapter, the following terms have the meanings given below:
 - 1. "Contractor" means any person, other than the soil generator or the recipient of the soil for use, who takes possession of the soil or takes responsibility for the management of the soil for use that is subject to this rule.
 - 2. "Recipient" means the person(s) responsible for implementing the soil use plan at the receiving site.
 - 3. "Soil" means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with vegetative matter (e.g., leaves, limbs, roots), construction or demolition debris (e.g., pieces of brick, concrete, wood, glass, metal), or other materials that is made up predominately of soil by volume based on visual inspection.
 - 4. "Soil generator" means the person(s) responsible for soil being excavated for removal and used outside the area of contamination from which the soil was removed.
- (c) Unless subparagraph (d) of this paragraph provides otherwise, this rule applies to soil that contains, or that may reasonably be anticipated to contain, a hazardous substance or substances and that is used outside the area of contamination from which the soil was removed. Soil from a property may reasonably be anticipated to contain a hazardous substance or substances if historic land use, previous spills or releases, analytical test results, professional judgment, a recognized environmental condition (consistent with a Phase 1 Environmental Site Assessment), or other reliable information suggests a hazardous substance or substances may be present.
- (d) This rule does not apply to soil:
 - 1. Used within the area of contamination, as approved by the Commissioner;
 - 2. That is determined and documented by a registered professional engineer,

registered professional geologist, environmental professional, or the Commissioner to be undisturbed and uncontaminated native soil prior to excavation.

(e) Use of soil outside the area of contamination from which the soil was removed is prohibited if the soil contains:

1. Polychlorinated biphenyls (PCBs) or PCB waste subject to regulation under the Toxic Substances Control Act, 15 U.S.C. §§ 2601-2697, and 40 C.F.R. part 761; or
2. A hazardous waste as defined by subparagraph (1)(c) of Rule 0400-12-01-.02 and that is subject to regulation under Chapter 0400-12-01, including waste subject to a conditional exemption.

(2) Soil categorization.

For the purposes of this rule, soil is categorized in accordance with the criteria of this paragraph:

(a) "Category 1 soil" is soil that is reasonably believed by a registered professional engineer, licensed professional geologist, or the Commissioner to contain a hazardous substance or substances, in concentrations:

1. Equal to or below natural background; or
2. (i) Below a Target Cancer Risk (TR)=1E-06 and Target Hazard Quotient (THQ)=0.1, which may be determined by reference to the applicable EPA Regional Screening Level (RSL) Residential Soil Table, or other scientifically-defensible value approved by the Commissioner; and
- (ii) Below a soil to groundwater transfer value based on a dilution attenuation factor of one for chemicals included in the General Use Ground Water criteria established in paragraph (2) of Rule 0400-40-03-.08. This value may be determined by reference to the EPA RSL Resident Soil to Groundwater Tables based on the maximum containment level, or by applying another scientifically-defensible method approved by the Commissioner. However:
 - (I) A dilution attenuation factor of 20 may be used if the soil to be used will cover less than 0.5 acres and the soil is not being placed directly on fractured bedrock or karst; or
 - (II) A Toxicity Characteristic Leaching Procedure or Synthetic Precipitation Leaching Procedure may be used to determine if the soil has potential to leach to groundwater; and-

(iii) Of volatile organic compounds in soil gas below the then-current vapor intrusion risk levels that would require a vapor mitigation system.

(b) "Category 2 soil" is soil that: ~~1. Contains a hazardous substance, but does not meet the criteria established in subparagraph (a) of this paragraph for Category 1 soil; or~~

~~2. Contains volatile organic compounds, regardless of the criteria established in part (a)2 of this paragraph.~~

(3) Soil characterization.

(a) Category 2 soil intended to be used outside the area of contamination from which the soil was removed must be characterized in accordance with subparagraph (b) of this paragraph.

(b) Testing Requirements.

1. Soil required by subparagraph (a) of this paragraph to be characterized must be sampled in accordance with part 2 of this subparagraph and analyzed in accordance with part 3 of this subparagraph.

2. Soil Characterization Plan Requirements.

(i) Except as allowed by subpart (iii) of this part, a soil characterization plan must be developed for the Commissioner's prior approval in accordance with this subpart, unless comparable information acceptable to the Commissioner is already available:

(I) The soil characterization plan must:

- I. Use statistical analysis, if applicable, to generate a statistically based representative concentration;
- II. Contain at least 10 samples if statistical analysis using parametric upper limits (95% upper confidence limits) are used; if the plan contains fewer than 10 samples, then the highest concentration shall be used to determine potential risk;
- III. Include, but not be limited to, an evaluation of the concentrations of contaminants, the physical and chemical nature of the contaminants, and the lateral and vertical distribution of contaminants in the soil; and
- IV. Describe the soil sampling collection procedure and handling prior to analytical laboratory testing, container and preservation information, field equipment information, decontamination procedures, and field screening techniques.

(II) At a minimum, the soil must be sampled as specified herein:

Volume of Soil subject to the rule (Cubic Yards)	Number of Representative Samples for Laboratory Analysis
0 – 60	4
60 – 240	8
240 – 480	12
480 – 720	16
One additional sample shall be submitted for laboratory analysis for each additional 120 cubic yards of soil subject to this rule.	

(ii) Samples must be representative of the soil that is intended for use and may include stockpile sampling and in situ sampling in accordance with

items (I) and (II) of this subpart:

- (I) Stockpile samples may be used to characterize soil. If compositing of samples is conducted and grid sampling is used, each sample must be comprised of a minimum of four subsamples collected randomly from within the stockpile. Compositing of stockpile samples is prohibited for volatile parameters. Stockpiles may be reconfigured to allow for adequate characterization.
- (II) If in situ sampling is used, it must be performed using a grid that includes both the horizontal and vertical extent of the volume of soil subject to this rule. Samples collected vertically must ensure collection of differing soil types or physical characteristics.
- (iii) A workplan proposing Incremental Sampling Methodology may also be submitted for review and approval by the Commissioner on a project-by-project basis.

3. Sample Analysis.

- (i) Laboratory analysis must be in accordance with the EPA RCRA Manual, SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Office of Solid Waste and Emergency Response (Third Edition, revised per the May 2020 Status Table).
- (ii) Samples must be analyzed for constituents that any due diligence evaluation of the historical use of the property identifies as potential contaminants. Unless the Commissioner specifically determines otherwise, all samples must be analyzed for the metals listed in Table 1 in subparagraph (3)(e) of Rule 0400-12-01-.02 and the analytes of SW-846 methods, 8260D Volatile organic compounds by Gas Chromatography/Mass Spectrometry. If metals are identified as a contaminant of potential concern, at a minimum, antimony, beryllium, copper, nickel, thallium, and zinc shall be included in the analysis.

(4) Category 1 Soil.

The soil generator at VOAP sites and the recipient of Category 1 soil may use that soil outside the area of contamination from which the soil was removed without meeting any additional requirements of this rule.

(5) Category 2 Soil.

- (a) Category 2 soil may be used outside the area of contamination from which the soil was removed provided that:
 - 1. (i) The generating site and receiving site are both enrolled in the Brownfield Projects Voluntary Cleanup Oversight and Assistance Program (VOAP), in accordance with T.C.A. § 68-212-224; or
 - (ii) The generating site is enrolled in the VOAP, in accordance with T.C.A. § 68-212-224, and the receiving site is determined by the Commissioner to be a suitable location for the beneficial use of the soil in a manner that is not detrimental to public health, safety, or the environment, and is a project that meets a greater public need and where the soil is encapsulated after placement. Examples include, but are not limited to, an airport runway,

public utility, public works, or roadway fill.

2. The Commissioner finds in writing that the proposed use of the soil will not adversely impact public health, safety, and the environment and approves the use of the soil at the receiving site; and
 3. All of the following requirements are met:
 - (i) The soil generator and the recipient of the soil send a written acknowledgment to the Commissioner that liability protection will not be granted by the Commissioner for the Category 2 soils;
 - (ii) The soil generator:
 - (I) Develops a complete soil use plan in accordance with subparagraph (b) of this paragraph;
 - (II) Submits the soil use plan to the Commissioner for approval in accordance with subparagraph (c) of this paragraph; and
 - (III) Complies with subparagraph (g) of this paragraph if the soil use plan requires modification; and
 - (iii) The soil generator, contractor, and the recipient of the Category 2 soil comply with:
 - (I) The soil use plan completed in accordance with subparagraph (b) of this paragraph and with any modifications to the soil use plan made in accordance with subparagraph (g) of this paragraph; and
 - (II) The additional management requirements of subparagraph (e) of this paragraph; and
 - (iv) The sampling conducted in accordance with paragraph (3) of this rule, or any other sampling conducted in accordance with approved methods, does not document the presence of PCBs or hazardous waste as defined by subparagraph (1)(c) of Rule 0400-12-01-.02 that is subject to regulation under Chapter 0400-12-01.
- (b) The soil generator proposing to have the Category 2 soil used outside the area of contamination from which the soil was removed must prepare a complete soil use plan containing the following information:
1. The name, address, and phone number of the soil generator and, if the soil generator is a business or governmental entity, the name, address, and phone number of a responsible official;
 2. The name, address, and phone number of the contractor or contractors, as applicable;
 3. A description of the soil proposed for use including:
 - (i) The manner in which it was or will be generated;
 - (ii) The quantity generated or an estimate of the quantity to be generated;

- (iii) An estimate of the quantity of soil to be used off site;
 - (iv) The proposed off-site use intended for the soil, and
 - (v) The proposed disposition of any remaining quantities of soil not planned for off-site use;
- 4. A certification that the soil is not prohibited from use by subparagraph (1)(d) of this rule;
- 5. The results of the characterization of the soil performed in accordance with paragraph (3) of this rule;
- 6. A description of how the soil will be processed prior to use outside the area of contamination from which the soil was removed, if applicable, and how it will be transported to prevent:
 - (i) Any adverse impact to public health, safety, and the environment;
 - (ii) The creation of objectionable odors, dust, unsightliness, fire, or other nuisance conditions; and
 - (iii) Releases of any hazardous substance from the soil into the environment;
- 7. If the soil is to be stored outside the area of contamination from which the soil was removed prior to use:
 - (i) The physical address of each area where the soil will be stored;
 - (ii) For each location, an estimate of quantity of soil to be stored and the maximum length of time, not to exceed one year, it will be stored before use by the recipient;
 - (iii) A description of how the soil will be managed during storage to prevent:
 - (I) Any adverse impact to public health, safety, and the environment, including but not limited to the release of soil to waters of the state;
 - (II) The creation of objectionable odors, dust, unsightliness, fire, or other nuisance conditions;
 - (III) Releases of any hazardous substance from the soil into the environment; and
 - (IV) The soil being stored or stockpiled in manner that prevents additional contamination; and
 - (iv) A description of how the soil will be managed in compliance with applicable erosion prevention and sediment control regulations;
- 8. A demonstration that the use of the soil will not adversely impact public health, safety, and the environment, including but not limited to:
 - (i) The intended destination of the soil and the destination's current or anticipated land use;

- (ii) Any potential releases of any hazardous substances from the soil into the surrounding environment;
 - (iii) The potential for the soil to adversely impact groundwater or other waters of the state at the receiving site;
 - (iv) If the soil contains a hazardous substance or substances that may volatilize, the potential for the soil to cause a vapor intrusion hazard; and
 - (v) The creation of objectionable odors, dust, unsightliness, fire, or other nuisance conditions;
 - 9. A description of any engineering controls and land use restrictions at the receiving site or that will be in place at the receiving site. If the controls or restrictions are not in place yet, then the timeline for their placement;
 - 10. A description of where the soil will be placed at the receiving site or sites including coordinates;
 - 11. A description of how the soil will be managed in compliance with applicable erosion prevention and sediment control regulations during placement and any planned construction activity at the receiving site;
 - 12. The method to be used for keeping records to accurately report actual quantities of soil used in the project at the receiving site;
 - 13. A schedule proposing the project initiation, major steps, and completion dates; and
 - 14. Any documentation requested by the Commissioner that supports the determinations made, the information submitted in the plan or any proposed revision to the plan, or any other relevant information requested by the Commissioner.
- (c) Submission of the soil use plan for Category 2 soil.
- 1. The soil generator must submit to the Commissioner for approval a complete soil use plan and any other information needed to demonstrate that the use of the soil complies with this rule prior to the soil being used outside the area of contamination from which the soil was removed.
 - 2. However, Category 2 soil may be taken outside the area of contamination from which the soil was removed and stored before a suitable destination site is identified provided the soil generator first submits to the Commissioner for approval the soil use plan required by subparagraph (b) of this paragraph containing:
 - (i) The information required by parts (b)1 through 7, 12, 13, and 14 of this paragraph prior to the soil being removed from the area of contamination for storage; and
 - (ii) The information required by parts (b)8 through 11, and 14 of this paragraph prior to the soil being removed from storage to the receiving site.
- (d) Upon completing review of the information submitted, the Commissioner will notify the applicant in writing that:

1. The use of the Category 2 soil has been approved and include any additional conditions the Commissioner deems necessary to prevent adverse impacts to public health, safety, and the environment; or
 2. The use of the Category 2 soil has been denied upon a finding that the proposed use would result in unacceptable adverse impacts to public health, safety, or the environment.
- (e) Upon receiving the Commissioner's approval:
1. The soil generator and contractor must:
 - (i) Comply with the approved soil use plan and any modifications to the soil use plan approved in accordance with subparagraph (g) of this paragraph;
 - (ii) Manage the Category 2 soil until the time it is used, including any storage, transportation, or processing, consistent with the current soil use plan and with all other applicable federal, state, and local laws, ordinances, rules, and regulations; and
 - (iii) Provide the soil use plan and any modifications to the soil use plan to the recipient of the Category 2 soil prior to the recipient receiving the soil.
 2. The recipient of the Category 2 soil must:
 - (i) Use the soil consistent with the approved soil use plan, any approved modifications to the soil use plan, and with any appropriate and applicable engineering standards, commercial standards, and agricultural or horticultural practices; and
 - (ii) Use the soil in compliance with all applicable federal, state, and local laws, ordinances, rules, and regulations.
- (f) The Commissioner may require that a notice of land use restrictions be recorded in accordance with T.C.A. § 68-212-225 on the deed to the receiving site where the Category 2 soil is used.
- (g) Modification of the soil use plan for Category 2 soil requested by the soil generator, contractor, or recipient, with the written consent of the soil generator, may be made at any time, provided the modified plan continues to demonstrate compliance with the requirements of subparagraph (b) of this paragraph and is submitted in accordance with subparagraph (c) of this paragraph. The soil use plan is not considered modified until it is approved by the Commissioner in writing.
- (h) The Commissioner may modify or revoke a Category 2 soil use approval if the Commissioner determines that:
1. The soil use plan and any other information submitted at the Commissioner's request contained material misrepresentations or false statements;
 2. The Category 2 soil has been stored for more than length of time specified in the soil use plan approved by the Commissioner;
 3. The Category 2 soil has not been managed or used as approved by the Commissioner; or

4. Based on new information or changed conditions, the Commissioner determines that the use of the Category 2 soil has a reasonable potential to cause an adverse impact to public health, safety, welfare, or the environment.
- (6) If the Commissioner determines that the soil subject to this rule was used in a manner that does not meet all the requirements of this rule, then pursuant to T.C.A. §§ 68-212-213 and 68-212-215, the Commissioner may assess civil penalties and require corrective action. In addition, failure to comply with the conditions of this rule will subject Category 2 soil to the applicable requirements of Chapter 0400-11-01.
- (7) The Commissioner is authorized to recover the Department's oversight costs associated with implementing this rule.

Authority: T.C.A. §§ 68-212-201 et seq. and 4-5-201 et seq.