

1301:7-9-17 SAMPLING AND ANALYSIS OF EXCAVATED SOILS FOR PURPOSES OF TREATMENT.

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to divisions (A)(2) and (E) of section 3737.88 of the Revised Code, the fire marshal hereby adopts this rule governing the sampling and analysis of excavated soils arising from underground storage tanks containing petroleum. This rule is adopted by the fire marshal in accordance with Chapter 119. of the Revised Code and shall not be considered a part of the "Ohio State Fire Code." The following petroleum UST systems are exempted from this rule:

- (1) Any UST system holding hazardous wastes listed or identified under Chapter 3745-51 of the Administrative Code, or a mixture of such hazardous waste and petroleum;
- (2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(B) of the Federal Water Pollution Control Act (33 U.S.C.A. 1251 and following);
- (3) Equipment or machinery that contains petroleum for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
- (4) Any petroleum UST system whose capacity is one hundred ten gallons or less;
- (5) Any UST system that contains a *de minimis* concentration of petroleum;
- (6) Any emergency spill or overflow containment UST system used for petroleum products that is expeditiously emptied after use.

(B) Definitions.

- (1) "Excavated soils" mean soils removed from the surface or subsurface in conjunction with a suspected release as that term is defined in paragraphs (B)(3) to (B)(3)(f) of rule 1301:7-9-13 of the Administrative Code; in conjunction with a release as that term is defined in paragraphs (B)(2) to (B)(2)(c) of rule 1301:7-9-13 of the Administrative Code; or in conjunction with the permanent abandonment, permanent removal, or replacement of a UST system pursuant to rule 1301:7-9-12 of the Administrative Code.

- (2) "Petroleum contaminated soils" mean soils that contain petroleum in concentrations that exceed one or more of the constituent concentrations listed for soils in category 1 of the action level table of paragraph (E)(4) of rule 1301:7-9-13 of the Administrative Code for the applicable analytical group.

- (3) "Soils" mean solid and semi-solid earthen materials or backfill consisting of sand, dirt, rocks, stones, or gravel and any debris contained therein at the time of excavation.

(C) General parameters.

- (1) Excavated soils may be segregated based upon apparent degree of contamination.
- (2) Each soil pile or container of soils shall be sampled according to this rule.
- (3) All excavated soils shall be managed as petroleum contamination soils unless laboratory analysis indicates otherwise.
- (4) The volume of excavated soils in soil piles shall be calculated to

determine the number of soil samples that shall be collected to comply with this rule. *In-situ* soil volume shall be converted to excavated soil volume by multiplying the *in-situ* volume by an expansion factor of 1.25. This paragraph shall not apply to excavated soils stored in containers.

(D) Sampling excavated soils.

- (1) Analytical results obtained from soil borings sampled pursuant to rules 1301:7-9-12 or 1301:7-9-13 of the Administrative Code may be used to characterize soils from such borings for purposes of this rule.
- (2) Analytical results obtained for the purpose of complying with paragraphs (K)(4)(c) to (K)(5) of rule 1301:7-9-12 of the Administrative Code shall not be used to characterize excavated soils generated during a permanent removal, permanent abandonment, or replacement of a UST pursuant to rule 1301:7-9-12 of the Administrative Code.
- (3) Excavated soils generated from various areas of a UST site or sites may be combined at the discretion of the owner or operator. The combined excavated soils may be

characterized for the purposes of this rule using the highest analytical result of any of the excavated soils so combined. If all the combined excavated soils had not been previously characterized for the purposes of this rule prior to being combined, such combined excavated soils shall be characterized in accordance with this rule.

- (4) Excavated soils that have not been previously characterized pursuant to paragraphs (D)(1), (D)(2), or (D)(3) of this rule shall be characterized as follows:

- (a) Soil samples shall be collected for field screening. At a minimum, the number of soil samples required to be collected for field screening shall be the number set forth in table 1 of paragraph (D)(4)(c) of this rule.
- (b) All soil samples collected for the purposes of this rule shall be discrete grab samples. Composite soil samples shall not be used for the purposes of complying with this rule.

- (c) Table used to determine the number of grab samples to be collected for field screening and laboratory analysis.

TABLE 1

	Cubic yards of soil generated				
	0-25	26-100	101-500	501-1000	> 1000
1. Minimum number of grab samples to collect and field screen	2*	6	8	10	10 plus 1 sample per each additional 100 cubic yards (or fraction thereof)
2. Minimum number of grab samples to submit to the laboratory if field screened	1	1	2	3	4 plus 1 sample per each additional 500 cubic yards (or fraction thereof)

* For soils in containers having a capacity of 55 gallons (.27 Cubic yards) or less see paragraph (D)(4)(e)(ii) of this rule.

- (d) Soil sample locations shall be determined by visually dividing the soil pile or the container with the excavated soil into a sampling grid with sections of approximately equal surface area in size numbering the same as the minimum number of grab samples required to be collected for field screening in accordance with table 1 of paragraph (D)(4)(c) of this rule.
- (e)(i) A grab sample shall be collected from the center of each grid section identified in paragraph (D)(4)(d) of this rule at least twelve inches below the soil surface or mid-depth if the depth of soils is less than twenty-four inches.
- (ii) For excavated soils in containers having a capacity of fifty-five gallons (.27 cubic yards) or less, one grab sample shall be collected from the center of the container at mid-depth of the soils in the container.
- (f)(i) When field screening is conducted, all grab samples shall be split into two components. One component shall be packaged and used for field screening. The remaining component shall be packaged for potential laboratory analysis. The packaging shall be in accordance with procedures established by the fire marshal.
- (ii) The minimum number of grab sample components

required to be submitted for laboratory analysis is specified in table 1 of paragraph (D)(4)(c) of this rule. The remaining component of the grab samples with the highest field screening readings shall be selected for submittal for laboratory analysis.

- (iii) Each sample collected from a container pursuant to paragraph (D)(4)(e)(ii) of this rule shall be submitted for laboratory analysis.
- (g) If field screening is not conducted on the grab samples, all of the grab samples collected pursuant to table 1 of paragraph (D)(4)(c) of this rule shall be submitted for laboratory analysis.
- (h) Grab samples submitted for laboratory analysis shall be analyzed for the parameters listed in table 1 of paragraph (D)(4) of rule 1301:7-9-13 of the Administrative Code as follows: if the stored regulated substance is a gasoline product, test only

for the parameters listed for analytical group no. 1; if the stored regulated substance is a middle distillate product, test only for the parameters listed for analytical group no. 2; if the stored regulated substance is a used oil or an unknown petroleum product, test only for the parameters listed for analytical group no. 3; if the stored regulated substance is heavy fuel oils or lubricating oils, test only for the parameters listed for analytical group no. 4; and if the stored regulated substance is another product other than listed in analytical groups 1 through 4, consult with the fire marshal for the appropriate parameters.

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