RULE 414.2 Soil Decontamination (Volatile Organic Compounds) - Adopted 5/6/99

I. Purpose

The purpose of this Rule is to limit Volatile Organic Compound (VOC) emissions from excavation and aeration, or treatment of soil that has been contaminated by organic compounds.

II. Applicability

This Rule shall apply to excavation and aeration, or treatment of VOC-contaminated soil.

III. Definitions

A. Active Soil Aeration Pile: Pile of contaminated soil with a volume of one cubic yard, or more undergoing aeration in accordance with requirements of Subsection V.B.

B. Aeration: Exposure of excavated contaminated soil to the atmosphere for the purpose of volatilizing VOC's.

C. Contaminated Soil: Soil which indicates 50 ppm by volume, or greater of VOC (measured as hexane) at a distance of three inches above the surface with a VOC analyzer.

D. Decontamination: Removal of VOC from contaminated soil by aeration, or KCAPCD-approved treatment process.

E. Excavation: Removal of contaminated soil for the purpose of decontamination. Excavated soil may have become contaminated by leaking underground or above ground tank, loading rack spillage, pipeline leak, accidental spill, or any other source.

F. Impervious Barrier: Physical covering for contaminated soil which controls VOC emissions to the extent a VOC analyzer detects less than 50 ppm by volume VOC (measured as hexane) at a distance of three inches above the surface.

G. Organic Content: Degree of contamination used to limit daily rate contaminated soil may be added to an active soil aeration pile.

H. VOC Analyzer: Hydrocarbon analyzer satisfying U.S. EPA Method 21, 40 CFR Part 60.

IV. Exemptions

A. Requirements of this Rule shall not apply to:

1. Decontamination of less than one cubic yard of contaminated soil;

2. Contaminated soil exposed for the sole purpose of sampling;

3. Soil contaminated solely by an organic liquid having an initial boiling point of 302 F, or higher, as determined by ASTM D86-78, provided such soil is not heated above ambient temperature and samples of the contaminating liquid can be obtained; or

4. Emergency excavation and/or decontamination of soil performed by, under jurisdiction of, or pursuant to requirements of, an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. The Control Officer shall be notified prior to commencing such excavation.

V. Requirements

A. Excavation

1. Any person performing an excavation subject to this Rule shall sample, with a VOC analyzer, excavated soil to determine if it is contaminated soil.

2. If excavated soil is contaminated soil, such soil shall be transported off-site for treatment, recycling, or disposal at an approved disposal site; stockpiled on site for aeration pursuant to Subsection V.B.; or returned to the excavation.

3. Contaminated soil not being aerated in accordance with Subsection V.B. shall be covered except when soil is being added or removed. Contaminated soil may be covered with a layer of uncontaminated soil no less than six inches deep, or it may be covered with an impervious barrier.

B. Aeration

1. Aeration shall be prohibited within 1000 feet of the nearest residence, school, or business, unless a risk assessment performed using the "CAPCOA Air Toxics Assessment Manual" indicates an excess cancer risk of less than one in a million and a chronic health risk of less than 0.2.

2. Maximum addition rate of contaminated soil to an active soil aeration pile shall comply with the following limits:

Maximum Allowable Addition Rates of Contaminated Soil

Organic Content of Soil (ppm by weight)	Allowable Addition Rate of Soil To Be Aerated (Cubic yards/day)
0 - 50	Any Amount
51 - 100	600
101 - 500	120
501 - 1000	60
1001 - 2000	30
2001 - 3000	15
3001 - 4000	10
4001 - 5000	8
5001 or greater	none

3. The Control Officer shall be notified, in writing, of all aeration activities prior to any aeration. Notification shall include:

    a. responsible party's name,
    b. location of aeration activity,
    c. total quantity of soil to be aerated,
    d. organic content of soil to be aerated,
    e. proposed daily aeration rate,
    f. location of stockpile(s) and aeration area(s), including distance(s) from nearest residence, school, or business, and
    g. xpected duration of aeration project.

C. Treatment Systems

1. Treatment of contaminated soil, except as allowed in Subsection V.B. (Aeration), shall be accomplished by:

    a. installation and operation of a VOC collection and control system for in-situ treatment of contaminated soil, or

    b. installation and operation of a VOC collection and control system for on-site treatment of contaminated soil.

2. Applicable requirements of Regulation II (Permits) shall be satisfied prior to installation of any equipment required for a treatment system.

VI. Administrative Requirements

A. Test Methods

1. Initial boiling point of a liquid shall be measured in accordance with ASTM D86.

2. For purposes of Subsections III.C. and III.F., volatilization of VOC's from contaminated soils shall be measured using a VOC analyzer which satisfies requirements of U.S. EPA Method 21, 40 CFR Part 60.

3. Organic content of soil shall be determined, as appropriate, by U.S. EPA Reference Method 8015, 8260, or the gas chromatographic method contained in the "Leaking Underground Fuel Tank (LUFT) Manual (October, 1989)" as approved by the California Department of Health Services.

B. Soil Sampling Procedure (Used in Determining Organic Content)
One composite sample shall be collected and analyzed for every 50 cubic yards of excavated contaminated soil to be aerated. At least one composite sample shall be collected from each inactive, uncovered storage pile within 24 hours after excavation. (Samples are not required if soil is not "contaminated soil".)

1. A composite sample shall consist of one sample taken from the center of each of four equal sectors of the area required to be sampled using procedures described

below unless another method is approved by the Control Officer because the standard method is infeasible.

2. Samples shall be taken from at least three inches below the surface of a pile using a driven-tube type sampler, capped and sealed with inert materials, and extruded in the lab to reduce loss of volatile materials; or by using a clean brass or stainless steel tube (at least three inches long) driven into the soil with a suitable instrument. Ends of the tube shall then be covered with aluminum foil, then plastic end caps, and finally wrapped with a suitable tape. Samples shall be immediately placed on ice, or dry ice, for transport to a laboratory.

3. Chain-of-custody records shall be kept to document possession of a sample from collection in the field until it is analyzed.

VII. Compliance Schedule

Any existing and active soil decontamination operation not in compliance with Subsection V.B. of this Rule on the date of adoption shall comply with the following compliance schedule:

A. Submit a compliance plan to KCAPCD within 60 days of the date of adoption of this Rule, and

B. Achieve compliance with this Rule within 180 days of submitting the compliance plan submitted pursuant to Subsection VII.A.