

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**RULE 1166 -- VOLATILE ORGANIC COMPOUND EMISSIONS FROM
DECONTAMINATION OF SOIL**

(Adopted August 5, 1988)(Amended July 14, 1995)(Amended May 11, 2001)

(a) Applicability

This rule sets requirements to control the emission of Volatile Organic Compounds (VOC) from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(b) Definitions

- (1) EXCAVATION is the process of digging out and removing materials, including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.
- (2) GRADING is the process of leveling off to produce a smooth surface including the removal of any material necessary to that process such as asphalt and concrete necessary to expose known VOC contaminated soil.
- (3) SOIL DECONTAMINATION MEASURE is any process approved by the Executive Officer to remediate, destroy, remove, or encapsulate VOC and VOC-contaminated soil.
- (4) UNDERGROUND STORAGE TANK means any one or combination of tanks, including pipes connected thereto, which is used for the storage of organic liquid which is more than 50% beneath the surface of the ground.
- (5) VOC CONTAMINATED SOIL is a soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated soil with an organic vapor analyzer calibrated with hexane.
- (6) VOC CONTAMINATED SOIL MITIGATION PLAN is a plan to minimize VOC emissions to the atmosphere during excavation and any subsequent handling of VOC-contaminated soil.

- (7) VOLATILE ORGANIC COMPOUND (VOC) is any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. Exempt compounds are defined in Rule 102—Definition Of Terms.
 - (8) VOLATILE ORGANIC MATERIALS include gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOC.
- (c) Requirements
- (1) A person excavating an underground storage tank and/or transfer piping storing or previously storing VOC materials, or excavating or grading soil containing VOC materials shall:
 - (A) Apply for, obtain and operate pursuant to a mitigation plan approved by the Executive Officer prior to commencement of excavation or handling. The mitigation plan general requirement and application requirements are found in Attachment A to this rule. A copy of the approved plan must be on site during the entire excavation period.
 - (B) Notify the Executive Officer at least 24 hours prior to excavation using a form approved by the Executive Officer which is fully completed.

If the excavation does not commence on start date, renotification is required.

An alternative notification procedure may be authorized for multiple excavations within a single facility, with prior written approval from the Executive Officer.
 - (C) Monitor for VOC contamination pursuant to subdivision (e), at least once every 15 minutes commencing at the beginning of excavation or grading and record all VOC concentration readings in a format approved by the Executive Officer; and
 - (D) When VOC-contaminated soil is detected during excavation or grading:
 - (i) Implement the approved mitigation plan (Attachment A).
 - (ii) Notify the Executive Officer within 24 hours of detection of VOC-contaminated soil.

- (iii) Monitor and record VOC concentration readings as prescribed in the plan. Monitoring records must be kept available on site.
 - (iv) Keep calibration records for all monitoring instruments available on site.
- (2) A person handling VOC-contaminated soil at or from an excavation or grading site shall:
 - (A) Segregate VOC-contaminated stockpiles from non-VOC contaminated stockpiles such that mixing of the stockpiles does not take place.
 - (B) Spray VOC-contaminated soil stockpiles with water and/or approved vapor suppressant and cover them with plastic sheeting for all periods of inactivity lasting more than one hour.
 - (C) Conduct a daily visual inspection of all covered VOC contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces. A daily inspection record must be maintained on site.
 - (D) Comply with the provisions in subparagraph (c) (1)(A) and clause (c)(1)(D)(i).
 - (E) Maintain a record of the identification and business addresses of the generator, transporter and storage/treatment facilities. Such record shall be signed by each party at the time custody is transferred.
 - (F) Treat or remove contaminated soil from an excavation or grading site within 30 days from the time of excavation.
- (3) If the VOC concentration in the excavated soil is measured at greater than 1000 ppm, spray the soil with water or vapor suppressant and:
 - (A) As soon as possible, but not more than 15 minutes, place the soil in sealed containers, or
 - (B) As soon as possible, but not more than 15 minutes, load into trucks, moisten with additional water, cover and transport off site, or
 - (C) Implement other alternative storage methods approved in writing by the Executive Officer.

- (4) A person treating VOC-contaminated soil shall:
 - (A) Obtain a permit to construct and operate treatment equipment, as applicable, from the Executive Officer, and
 - (B) Implement VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology applied during all segments, and which include, but are not limited to, at least one of the following:
 - (i) Installation and operation of an underground VOC collection system and a disposal system prior to excavation.
 - (ii) Collection and disposal of the VOC from the excavated soil on-site using equipment approved by the Executive Officer.
 - (iii) Any equivalent VOC-contaminated soil control measure previously approved in writing by the Executive Officer.
- (5) A person shall not engage in or allow any on-site or off-site spreading, grading or screening of VOC-contaminated soil, which results in uncontrolled evaporation of VOC to the atmosphere.
- (6) Loading trucks for contaminated soil must meet the following:
 - (A) The truck and trailer shall be adequately tarped prior to leaving the site; no excavated materials shall extend above the sides or rear of the truck or trailer to prevent soil spillage during transport, and
 - (B) The exterior of the truck, trailer and tires shall be cleaned off prior to the truck leaving the site.
- (d) Exemptions
 - (1) The provisions of this rule shall not apply to the following:
 - (A) Excavation, handling, and treating of less than one (1) cubic yard of contaminated soil.
 - (B) Removal of soil for sampling purposes.
 - (C) Accidental spillage of five (5) gallons or less of VOC containing material.

- (2) The provisions of paragraphs (c)(1) and (c)(2) shall not apply to soil excavation or handling as a result of an emergency as declared by an authorized health officer, agricultural commissioner, fire protection officer, or other authorized agency officer. Whenever possible, the Executive Officer shall be notified by telephone prior to commencing such excavation. The Executive Officer shall be notified in writing no later than 48 hours following such excavation. Written notification shall include written emergency declaration from the authorized officer.
- (e) Test Methods
- (1) A person shall measure excavated soils for volatile organic compounds to determine contamination by:
 - (A) Using an organic vapor analyzer calibrated with hexane, complying with 40 CFR Part 60 Appendix A, EPA Reference Method 21 Section 3 or any equivalent method with prior approval in writing by the Executive Officer. If other calibrating gases are used, then the measured readings shall be correlated to and expressed as hexane.
 - (B) Placing the probe inlet at a distance of no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, observe the instrument readout. If an increased meter reading is observed, continue to sample the excavated soil until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately double the instrument response time. If the maximum observed meter reading is greater than the 50 ppm standard in the regulation, record and report the results.
 - (2) The presence of VOC in stored or spillage materials shall be determined by SCAQMD Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in Headspace] and/or Method 304 (Determination of Volatile Organic Compounds in Various Materials) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(f) Enforcement

- (1) Violation of any provision of this rule or the violation of the approved mitigation plan shall be grounds for the Executive Officer to amend or revoke the mitigation plan, in addition to penalties provided by the Health & Safety Code.
- (2) If the owner or operator is served with a Notice of Violation for creating a public nuisance, the owner or operator shall suspend operation until the public nuisance is mitigated to the satisfaction of the Executive Officer.

ATTACHMENT A
GENERAL MITIGATION PLANS REQUIREMENTS

VOC Contaminated Soil Mitigation Plans shall be written to minimize VOC emissions to the atmosphere during excavation, grading, handling and treatment of VOC contaminated soil. VOC Contaminated Soil Mitigation Plans shall consist of three types: Various Locations, Site Specific and Facility Treatment.

- (1) General Requirements
 - (A) A plan is not transferable.
 - (B) A person responsible for the excavation, grading or handling of VOC contaminated soil must be completely familiar with the plan and must adhere to the plan requirement. The Executive Officer may require that the plan be signed by the owner and/or operator.
 - (C) A plan may be amended upon renewal.
 - (D) Permission to excavate, grade or handle VOC contaminated soil may be withdrawn by the District upon a finding by the Executive Officer that the excavation, grading or handling of the VOC contaminated soil is causing a public nuisance or violating other AQMD rules or regulations.
- (2) Various Location Plans:
 - (A) Shall be limited to the excavation of 2000 cubic yards or less of VOC contaminated soil in any consecutive 12 month period at the same site.
 - (B) Shall not be used in conjunction with any other various location plan at the same site within a consecutive 12-month period.
 - (C) Shall expire after one year from issuance unless renewed.
 - (D) Shall not be issued for nor used for operations that involve grading, soil treatment or remediation, or landfills.
- (3) Site Specific Plans:
 - (A) Shall be for excavation of greater than 2000 cubic yards of VOC contaminated soil.
 - (B) Shall be issued for specific excavation or grading locations for a period not to exceed two years.
 - (C) Shall not be renewable.

- (4) Facility Treatment Plans:
 - (A) Shall be issued for a treatment facility at a permanent location.
 - (B) Shall expire after one year from issuance unless renewed.
- (5) Applications for Site Specific Plans shall contain as a minimum:
 - (A) Reasons for excavation or grading.
 - (B) Cause of VOC soil contamination and history of the site.
 - (C) Description of tanks or piping associated with the soil contamination.
 - (D) An estimate of the amount of contaminated soil.
 - (E) The operating schedule for excavation and removal.
 - (F) Description of how the excavation or grading will be conducted.
 - (G) Description of mitigation measures for dust, odors and VOC.
 - (H) Details of disposal of VOC contaminated soil, including the ultimate receptor.
 - (I) Description of monitoring equipment and techniques.
 - (J) A map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential areas or other sensitive receptors such as hospitals or locations where children or elderly people live or work.
 - (K) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.
- (6) Applications for Facility Treatment Plans shall at a minimum:
 - (A) Include a list of all AQMD permits to construct or operate which have been issued for that treatment and control equipment.
 - (B) Provide for the implementation of VOC-contaminated soil decontamination measures, as approved by the Executive Officer in writing, which result in Best Available Control Technology during all operations.
 - (C) Provide a map showing the facility layout including the location of all proposed VOC and non-VOC contaminated soil stockpiles.
 - (D) Specify the total amount of VOC contaminated soil proposed to be stockpiled on site.
 - (E) Provide for VOC contaminated soil stockpiles to be kept moist with water or suppressant and be covered to prevent fugitive emissions.

- (F) Provide for VOC contaminated soil stockpiles to be segregated from non-VOC contaminated soil stockpiles.
 - (G) Provide for maintenance of records for stockpiles according to the source name, address and dates of reception.
 - (H) Provide for records of the generator, transporter and storage/treatment facilities and indicate their identification and business addresses. Such records shall be signed by each party at the time custody is transferred.
 - (I) Provide a map showing the facility layout, property line, and surrounding area up to 2500 feet away, and including any schools, residential area or other sensitive receptors such as hospitals, or locations where children or elderly people live or work.
 - (J) Designation of a person who can conduct a site inspection with the Executive Officer prior to issuance of the plan.
 - (K) Specify the operating schedule and maximum amount of VOC-contaminated soil proposed to be remediated on a daily basis.
- (7) In approving a plan, the Executive Officer require reasonable conditions deemed necessary to ensure the operations comply with the plan and AQMD rules. The conditions may include, but shall not be limited to, procedures for ensuring responsibility for the implementation of the plan, accessibility to the site for AQMD staff, notification of actions required by the plan, identification of emission receptors, monitoring and testing, suppression and covering of stockpiles, prevention of public nuisance from VOC or dust emissions, prevention of fugitive emissions of VOC contaminated soil, loading of truck trailers, and disposal and treatment.
- (8) In approving a plan, the Executive Officer may require any records deemed necessary to be maintained by the operator to demonstrate compliance with the plan. Such records shall be retained for at least 2 years and be made available to the Executive officer upon request.