

AIR POLLUTION CONTROL DISTRICT
REGULATORY COMPLIANCE DIVISION

POLICIES AND PROCEDURES

Policy No. III.C.1
Supersedes Date 01/02/90
Date March 26, 1990

Draft _____
Final X
Pages 3

Topic: Paint, Fuel, Oil, & Other VOC Samples

Distribution: All Policy Holders

This policy and procedure provides guidance on taking samples of paint and other liquid volatile organic compounds (VOCs).

Some VOCs sampled may be toxic and/or hazardous in nature. Extreme care should be taken not to accidentally spill any liquid on exposed skin or to unnecessarily breathe in any vapors. Gloves impermeable to the solvents or materials to be sampled should always be worn. Safety goggles and respirators may be warranted where there are fumes in enclosed areas or splash hazards (e.g., solvent degreasers, crude oil production, processing and transfer facilities). Always follow the safety practices delineated in Policy and Procedure Number I.E.1, Safety. If there are additional safety-related questions concerning the materials to be sampled, consult the appropriate Enforcement Supervisor before taking the sample.

Use disposable wipes to thoroughly clean the outside of the container after the sample has been taken and sealed. Always tightly cap the sample container and carry/transport it in an upright position.

Certain VOCs may form explosive mixtures in the vapor space between the liquid surface and the top of the sample container. Consequently, all VOC samples and in particular, samples for vapor pressure, must be kept iced at all times. There should be an adequate amount of ice in the ice chest to completely surround the sample container but not to cover it. There are two exceptions for the need to ice a sample: previously unopened gallon-sized cans (e.g., house paint) and heavy fuel oil, unless it is for a vapor pressure sample.

If possible, obtain a Material Safety Data Sheet (MSDS) and a product data sheet for each different type of sample.

SAMPLE CONTAINERS

When obtaining samples, the following types of containers are to be used:

1. One quart, round wide-mouth metal can--most paint and VOC samples, e.g., inks, asphalt, resins.
2. One-half pint, round wide-mouth metal can--paints and VOCs that are limited in quantity or are very expensive; individual components of multi-part samples, e.g., polyurethane coatings that use a catalyst or hardener; non-heatset inks.

3. One quart, square metal can with a small screw top cap--all vapor pressure samples, including gasoline and jet fuel.
4. Plastic bottles with screw top caps--corrosive substances such as acid etch primers and paint catalysts, especially the Methyl Ethyl Ketone (MEK) peroxide catalysts.

PAINT

Equipment: Solvent-resistant gloves, disposable wipes, paint sample container, sampling ladle¹, Sample Identification Tag (ENF-21), ice chest and ice.

When obtaining samples from vendors, select previously unopened pint or quart-sized cans of paint². In this situation, there is no need to transfer the paint into a sample container.

Plastic instead of stainless steel sampling ladles shall be used for corrosive substances such as paint catalysts.

When sampling paint that is being applied, take the sample from the container that the painter is using at that time and not from an unopened container. Determine whether or not the paint being sampled is well mixed and ready to use, i.e., the paint has not been left undisturbed long enough for the various constituents to settle. In case of any doubt, request the painter to re-mix the paint before taking the sample. Then either have the painter use the spray gun or use the sampling ladle to fill the container to 80% capacity. A new ladle must be used for each sample taken³. Except for previously unopened gallon-sized cans, place the sample in the ice chest with ice.

For both unopened cans and spray gun/ladle-filled sample containers, complete and attach a Sample Identification Tag (ENF-21) and follow the chain of custody procedures specified in Policy No. III.B, Chain of Custody. Include in the "Remarks" section of the tag any pertinent information written on the paint container - e.g., manufacturer, color, lot number, etc.

DIESEL AND FUEL OIL

Equipment: Solvent-resistant gloves, disposable wipes, a diesel/fuel oil sample container, a funnel, a sampling ladle, a six (6) foot long wooden pole, twine, a Sample Identification Tag (ENF-21), an ice chest and ice.

Almost all samples of diesel and fuel oil will be taken from industrial, large commercial and institutional facilities. In a few

¹ This is essentially a plastic or Teflon-coated metal soup ladle.

² Gallon-size for architectural coatings. Rule 323.D exempts architectural coatings supplied in containers having capacities of one liter (approx. 0.94 quarts) or less.

³ After returning to the office, all "used" ladles must be thoroughly cleaned with an appropriate solvent (e.g., water, paint thinner) and dried prior to subsequent re-use.

instances, diesel may be sampled from motor vehicle fueling facilities (MVFFs) and marine vessels.

1. MVFFs - use the dispensing nozzle.
2. Marine vessels - if at all possible, obtain the sample from the dispensing facility serving the vessel. Otherwise, locate a drain cock/valve in the vessel fuel line, tank or engine. As a last resort, use the ladle to take the sample from the vessel fuel tank by dipping it into the tank via the loading hatch. If the fuel level cannot be easily reached, tie the ladle to the wooden pole. The funnel can be used to facilitate filling the sample container.
3. Industrial, commercial and institutional facilities - if possible, obtain the sample from a drain cock/valve/sampling port in the fuel line, fuel pump or combustion equipment. Again, as a last resort take the sample from the storage tank, following the directions given for marine vessels.

In all situations, fill the sample container to 80% capacity, place the container in the ice chest with ice (except for heavy fuel oil not being sampled for vapor pressure), complete and attach a Sample Identification Tag (ENF-21) and follow the chain of custody procedures specified in Policy Number III.B, Chain of Custody.

OTHER VOCs

Equipment: Solvent-resistant gloves, disposable wipes, safety goggles and a respirator (as necessary), a sample container, a sampling ladle, a Sample Identification Tag (ENF-21), an ice chest and ice.

Plastic instead of stainless steel sampling ladles shall be used for corrosive substances such as acid etch primers.

Other materials which contain VOCs include degreasing solvents, waste water discharges from dry cleaners and leachate at waste disposal sites. If at all possible, fill the sample container from a spout, hose or other point source of discharge; otherwise, use the ladle. In all cases, fill the sample container to 80% capacity, place the container in the ice chest with ice, complete and attach a Sample Identification Tag (ENF-21) and follow the chain of custody procedures specified in Policy Number III.B, Chain of Custody.

SHIPPING AND PACKAGING INSTRUCTIONS

All paint and VOC samples are to be shipped to the analysis laboratory on the day the sample is collected unless authorized or directed by the Sampling Coordinator. This is particularly important for samples that are known or suspected to contain chlorinated hydrocarbons such as methylene chloride, 1-1-1 trichloroethane and paint thinners and strippers due to their high volatility and health hazard risks. Samples which are required to be iced when collected must also be iced during shipping and kept in the sample refrigerator pending shipment.

