GUIDANCE FOR IMPLEMENTING NEW VOC RULE CHANGES

On July 1, 2000, 15A NCAC 2D .0518, Miscellaneous Volatile Organic Compound Emissions, was repealed and a new rule, 15A NCAC 2D .0958, Work Practices for Sources of Volatile Organic Compounds, became effective.

General Applicability and Exemptions

The rules in Section 15A NCAC 2D .0900, Volatile Organic Compounds, apply according to 15A NCAC 2D .0902, Applicability. What has changed in the applicability of this Section is that 15A NCAC 2D .0948, VOC Emissions from Transfer Operations, .0949, Storage of Miscellaneous Volatile Organic Compounds, and .0958, Work Practices for Sources of Volatile Organic Compounds now apply statewide. (NOTE: 15A NCAC 2D .0951, Miscellaneous Volatile Organic Compound Emissions, does not apply to anyone unless a facility or source has chosen compliance with this Rule as its method for complying with 2D .0518.)

Rule 2D .0902 also contains three exemptions from the rules in Section 2D .0900, two of which are pertinent to 2D .0958. One of these exemptions is for sources that emit no more than 15 pounds of VOC per day. The other deals with laboratories.

In general, the 15-pound-per-day exemption (15A NCAC 2D .0902(h)(1)) applies to sources whose emissions do not exceed 15 pounds for any day. If the source exceeds 15 pounds on any one day, this exemption does not apply. This interpretation of this exemption is appropriate for most processes. However, for maintenance areas, construing the exemption as a maximum daily limit is not practical without a great deal of record keeping. For maintenance areas, a more practical interpretation would be 15 pounds per day averaged over the number of days of operation for the year.

For a coating operation, emissions from equipment and activities, such as spray booths, equipment cleaning, and tanks and containers containing coating or cleaning materials, associated with that coating operation and located in the proximity of the coating operation, are included with the emissions from the coating operation to determine if the 15-pound-per-day exemption applies. However, if a centralized storage tank, for example, serves multiple coating operations, emissions from that tank would not be included with the emissions from the coating operations when determining if the 15-pound-per-day limit applies.

The laboratory exemption applies to sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance if (1) the operation of the source is not an integral part of the production process, (2) the emissions from the source do not exceed 800 pounds per calendar month, and (3) the exemption is approved in writing by the Director. The best way to understand this exemption is to read it to mean essentially the same thing as the permit exemption for laboratory activities (15A NCAC 2Q .0102(c)(1)(C) with an 800-pounds-per-calendar-month cap. Furthermore, the facility needs to request and receive approval from the Director (Regional Supervisor) to qualify for this exemption. (NOTE: If the emissions from the laboratory do not exceed 15 pounds per day, it qualifies for the 15-pound-per-day exemption under 2D .0902(h)(1) and does not need approval from the Division of Air Quality.) For laboratories, “source” should be interpreted to mean the entire laboratory regardless of hoods. Generally, laboratories that are physically

separated would be considered different sources. However, in some situations identifying laboratories as sources based on function may be more appropriate and practical.

Definition of Volatile Organic Compound

Under Section 2D .0900, "volatile organic compound" is defined differently than it is under 2D .0518. Under Section 2D .0900 a volatile organic compound is any organic compound of carbon that can be measured using certain standard EPA testing procedures except for compounds that the EPA has determined to have negligible photochemical reactivity. These compounds with negligible photochemical reactivity are listed in 40 CFR Part 51.100(s) and include methyl chloroform (1,1,1-trichloroethane), methylene chloride (dichloromethane), acetone, perchloroethylene, methyl acetate, and several chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons. The rules in Section 2D .0900 do not apply to these compounds that the EPA has determined to have negligible photochemical reactivity. However, if these compounds are contained in a mixture with volatile organic compounds, then the requirements of 2D .0958 apply to them as part of that mixture—separating the mixture into volatile organic compounds and non-volatile organic compounds is seldom practical.

VOC Emissions from Transfer Operations

15A NCAC 2D .0948, VOC Emissions from Transfer Operations, replaces 2D .0518(c). Transfer operations covered under 2D .0518(c) are now covered under 2D .0948 and should continue to comply with all monitoring, recordkeeping, and reporting requirements in the permit for the transfer operation unless the material being loaded has a vapor pressure less than 1.5 pounds per square inch. Unlike 2D .0518(c), which does not have a vapor pressure cutoff, 2D .0948 does. "Loading operation" in 2D .0948 should mean the same as "loading facility" in 2D .0518(c). Each loading rack is a loading operation.

Storage of Miscellaneous VOC

15A NCAC 2D .0949, Storage of Miscellaneous Volatile Organic Compounds, replaces 2D .0518(b). Tanks that were covered under 2D .0518(b) are now covered under 2D .0949 and should continue to comply with all monitoring, recordkeeping, and reporting requirements in the permit for the storage of liquid organic compounds.

Work Practices

The new work practice rule, 15A NCAC 2D .0958, Work Practices for Sources of Volatile Organic Compounds, has an extremely broad coverage. With the exception of architectural or maintenance coating and sources subject to the furniture MACT, this Rule applies to every facility using VOC as solvents, carriers, material processing media, or industrial chemical reactants, or other similar uses or that mix, blend, or manufacture VOC, or emit VOC as a product of chemical reactions. This Rule applies to sources covered under NSPS and MACT. However, the substantive parts of this Rule—Paragraphs (c) and (d)—apply on a source basis. Thus, if a source emits no more than 15 pounds of VOC per day, it is not covered under the requirements of Paragraph (c) and (d)—see the discussion above on this exemption. It is possible for a facility covered by this rule not to have any sources covered because each source emits less than 15 pounds of VOC per day.

Although Rule .0958 applies to a facility as a whole, it only imposes requirements on individual sources. It has two primary purposes: (1) to provide some minimum VOC control and (2) to serve as an air toxic trigger for VOC emitters.

2D .0958(e) requires sources with control devices that were installed to comply with 2D .0518 to continue to maintain and operate the control devices unless the Director determines that removal of the control device does not cause or contribute to a violation of the ozone ambient air quality standard. No determination has yet been made. The most convincing way to make this determination is through modeling. However, modeling may not be the only way. A demonstration that shows that the increase in VOC emissions is insignificant may also suffice. In any event, if the control device is being used to avoid PSD or some other requirement, then the control device must continue to be used to avoid these other requirements. Furthermore, a source with a control device is still subject to the requirements of 2D .0958(c) and (d).

2D .0958(f) requires sources that have complied with 2D .0518 by complying with a rule in Section 2D .0900 to continue to comply with that rule unless the Director determines that removing this requirement will not cause or contribute to a violation of the ozone standard. However, a demonstration here becomes meaningless because the requirements of 2D .0518 were applied on a coating basis. The coating had to meet either the low solvent requirement of a rule in 2D .0900 or the nonphotochemical definition in 2D .0518. Thus, coatings could be substituted at will as long as they met one of these two requirements. Furthermore, a source that is covered under another Section 2D .0900 rule is also covered under 2D .0958, including Paragraphs (c) and (d).

The following are responses to some of the questions or concerns that have been raised on interpreting the requirements of 2D .0958:

1. Paragraph (c)(1) requires storing material in containers covered with a tightly fitting lid when not in use. To meet the requirement of this Paragraph a seal is not needed between the lid and container. Many containers are being used that have metal lids without any kind of seal. For the purposes of this Rule, these containers can satisfy the requirements of this Paragraph. However, the lid does need to be free of cracks, holes, and other defects and closed when the container is not in use.
2. Paragraph (c)(1) refers to waste material containing volatile organic compounds. For the purposes of the Paragraph, waste material means spent solvent or coating material; it does not include coated product waste.
3. Paragraph (c)(1) does not apply to coating mixing vessels. It applies only to containers used to store VOC material.
4. Paragraph (c)(4) does not apply to processes designed to clean these types of absorbent materials. It applies to activities like cleaning a sponge or rag in a bucket of solvent.
5. In Paragraph (c)(5) and (6), “solvent” means solvent in the traditional or common usage of the word—it essentially means the same thing as “solvent” in 2D .0518(d), a VOC used as a cleaner or carrier. If a VOC that is normally used as a reactant is used to clean lines, then for this usage this VOC becomes a solvent and must be drained into a closable container, which is closed after each use.
6. In Paragraph (c)(5), “supply line” means any type of supply line, not just coating supply lines.

7. In Paragraph (c)(6), the requirement to pour spent cleaning solvent into a closed container does not apply to reactors, vats, and other containers where the spent cleaning solvent is drained and piped to a waste treatment plant.
8. If water or water and detergent or soap are used to clean equipment, this cleaning process is not covered under this Rule even if the water picks up small amounts of VOC as a result of the cleaning.
9. Water based solvents, coatings, or materials that contain insignificant amounts of VOC are not covered under this Rule.

Monitoring, Recordkeeping, and Reporting

All the monitoring, recordkeeping, and reporting associated with complying with 2D .0518(d) by solvent formulation are no longer needed and should be voided. 2D .0958 does not require any monitoring, recordkeeping, or reporting except under Paragraph (e), when a control device has been used to comply with 2D .0518, and Paragraph (f), when compliance with a rule in 2D .0900 has been used to comply with 2D .0518. Possibly, with the rare exception of a habitual problem source, recordkeeping and reporting should not be required to implement 2D .0958. In this respect, this rule is analogous to traffic rules.

Air Toxic Issues

2D .0958 can be used to trigger the air toxic rules. In this respect, it should be treated like any other rule in triggering the air toxic requirements. If a new facility is not exempted from permitting and has at least one source covered by this Rule, it has triggered an air toxic evaluation. Modifications at an existing facility covered by this Rule are treated the same as modifications at facilities covered by any other 2D rule. Changes in formulations, solvents, etc. continue to be treated as they are currently treated under the air toxic rules.

Compliance Schedule

Some (many) facilities will not be in compliance with 2D .0958 when it goes into effect on July 1, 2000. Some can be in compliance within two or three months as all they need to do is make some minor equipment modifications and train workers in the new requirements. Others may need a year or more, as they may want to undertake a major modification. Special Orders by Consent can be used for facilities requiring a lengthy schedule. For facilities requiring a short schedule, enforcement discretion can be used, i.e., enforcement action need not be taken if the facility is making a good faith effort to comply with the Rule in a timely manner.