10 CSR 10-2.215 Control of Emissions from Solvent Cleanup Operations

(1) Applicability.

(A) This rule shall apply throughout Clay, Jackson and Platte counties.

(B)This rule shall apply to any person who performs or allows the performance of any cleaning operation involving the use of a VOC solvent or solvent solution. The provisions of this rule shall not apply to any stationary source at which cleaning solvent VOCs are emitted at less than five hundred (500) pounds per day. Once a source is determined to exceed the applicability level of this rule, it shall remain subject to this rule even if its actual emissions drop below the applicability level.

(C)The following cleaning operations are not subject to the provisions of this rule:

1. Cold cleaner;

2. Open top vapor degreaser;

3. Conveyorized cold cleaners;

4. Conveyorized vapor degreaser;

5. Nonmanufacturing area cleaning. Nonmanufacturing areas include cafeterias, laboratories, pilot facilities, restrooms, and office buildings;

6. Cleaning operations for which there has been made a best available control technology, reasonably available control technology, or lowest achievable emission rate determination; and

7. Cleaning operations which are subject to the Aerospace National Emission Standards for Hazardous Air Pollutants Standards source category, under 40 CFR 63 subpart GG.

(2) Definitions.

(A) Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.

(B) Simple mass balance equation (SMBE) for the purposes of this rule is a summation of the vapor amounts that equal the total weight of liquid solvent in the system minus the weight of liquid solvent in the used category.

$$V_e = S_i - S_o(1 - X_{ci})(1 - C_{ei})$$

Where

V_e= Total weight of the evaporative loss of the VOC. (from container, the cleaning operation, the surface being cleaned, and the discard wipes and residue)

S_i= Liquid VOC input weight

S_o= Total liquid VOC output weight (from the cleaning operation, the surface being cleaned and the discard wipes and residue)

X_{ci} = Total weight fraction of the contaminants (in the wipes and liquid residue)

C_{ei}= Total weight fraction due to control of VOCs attributed to add on emission control device(s). Note C_{ei} will be zero (0) if not applicable.

(3) General Provisions.

(A) Any person performing any industrial cleaning operation, not excluded in subsection (1)(B) or (1)(C) of this rule, involving the use of a VOC solvent or solvent solution shall demonstrate a thirty percent (30%) reduction in plant-wide industrial VOC cleaning solvent emissions as described in subsection (3)(B) of this rule by May 1, 2003.

(B) Solvent Emission Reduction. The following provisions shall apply to any stationary source subject to subsection (3)(A) of this rule:

1. A thirty percent (30%) emission reduction shall be based on the average of the summation of the emissions in 1997 and 1998 or shall be based on total VOC emissions from plant-wide solvent cleanup operations divided by units produced in 1997 and 1998. If the owner/operator demonstrates that 1997 and 1998 are not representative production years, then a demonstration shall be made to the agency that other years are more representative for purposes of comparison or for prorating cleaning solvent usage. The following applicable documentation of actions and associated emission reductions shall be sent to the department for approval by December 1, 2002:

A. Changes in cleaning solvents used;

B. Changes in work practices; and

C. Changes in equipment or processes; and

2. The changes described in paragraph (3)(B)1. of this rule shall remain in effect until other changes resulting in greater, or equal, VOC emission reductions from the cleaning operations are implemented.

(4) Reporting and Record Keeping. The person responsible for industrial cleaning operations at an affected facility seeking to comply with subsection (3)(A) of this rule shall keep records of information sufficient for the calculation of emissions from each Unit Operation System (UOS) from the use of industrial cleaning solvents. A UOS consists of an industrial cleaning operation around which all organic solvent usage, disposal and fugitive losses may be calculated using a SMBE. As an aid to compliance with this section, records for industrial cleaning UOSs may include one (1) or more of the following:

(A) Engineering drawings or sketches of all UOSs used to define industrial cleaning operations within the facility, including a system boundary, organic solvent input(s), organic solvent output(s), and organic solvent evaporative loss points. These drawings shall include each of the following:

1. Labeled boxes within the system boundary which describe all components of the UOS, including any virgin solvent containers, solvent applicators, used solvent containers, and the surface being cleaned;

2. Numbered or lettered arrows depicting liquid and/or evaporative solvent flow, accurate with respect to relative mass flow rates in and out of the system boundary; and

3. Arrows depicting all organic solvent pathways within the system boundary;

(B) One (1) accurate SMBE for each UOS depicted in subsection (4)(A) of this rule. Each equation shall have variables consistent with those used to define the corresponding UOS and shall be solved for total VOC emissions for the UOS;

(C) Any assumptions or approximations made in defining the UOSs; and

(D) Records shall be retained by the owner or operator for a minimum of five (5) years. These records shall be made available to the representatives of the department upon request.

(5) Test Methods. (Not Applicable)

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)
FRM: 67 FR 20036 (04/24/2002)
PRM: 67 FR 20080 (04/24/2002)
State Submission: 05/17/2001
State Final: 10 C.S.R. 10-2 (04/30/2001)
APDB File: MO-178
Description: This is a new rule applicable to those performing a cleaning operation in Clay, Platte, and Jackson Counties in the Kansas City, Missouri, area involving the use of a solvent or a solvent solution.

Difference Between the State and EPA-Approved Regulation

None.