**Section 219.219 Work Practice Standards for Aerospace Facilities, Automobile and Light-Duty Truck Assembly Coatings, and Miscellaneous Metal and Plastic Parts Coatings**

a) Every owner or operator of a coating line subject to the requirements of Section 219.204(a)(2) must:

1) Store all VOM-containing coatings, thinners, coating-related waste materials, cleaning materials, and used shop towels in closed containers;

2) Ensure that mixing and storage containers used for VOM-containing coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing those materials;

3) Minimize spills of VOM-containing coatings, thinners, and coating-related

waste materials;

4) Convey VOM-containing coatings, thinners, and coating-related waste

materials from one location to another in closed containers or pipes;

5) Minimize VOM emissions from cleaning of storage, mixing, and conveying equipment;

6) Develop and implement a work practice plan to minimize VOM emissions from cleaning and from purging of equipment associated with coating lines subject to the limitations in Section 219.204(a)(2). The plan must specify practices and procedures that the source will follow to ensure that VOM emissions from the operations listed in this subsection (a)(6) are minimized. If the owner or operator of the subject coating line has already implemented a work practice plan for the coating line under Subpart IIII of 40 CFR 63, incorporated by reference in Section 219.112, the owner or operator may revise the plan as necessary to comply with this Section.

A) Vehicle body wiping;

B) Coating line purging;

C) Flushing of coating systems;

D) Cleaning of spray booth grates, walls, and equipment; and

F) Cleaning of external spray booth areas.

b) Except as provided in subsection (c), every owner or operator of a coating line described in Section 219.204(q) must:

1) Store all VOM-containing coatings, thinners, coating-related waste materials, cleaning materials, and used shop towels in closed containers;

2) Ensure that mixing and storage containers used for VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing these materials;

3) Minimize spills of VOM-containing coatings, thinners, coating-related

waste materials, and cleaning materials;

4) Convey VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials from one location to another in closed containers or pipes;

5) Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers; and

6) Apply all coatings using one or more of the following application methods:

A) Electrostatic spray;

B) High volume low pressure (HVLP) spray;

C) Flow coating. For the purposes of this subsection (b)(6)(C), flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;

D) Roll coating;

E) Dip coating, including electrodeposition. For purposes of this subsection (b)(6)(E), electrodeposition means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created;

F) Airless spray;

G) Air-assisted airless spray; or

H) Another coating application method capable of achieving a transfer

efficiency equal to or better than that achieved by HVLP spraying, if the method is approved in writing by the Agency.

c) Notwithstanding subsection (b), the application method limitations in subsection (b)(6) do not apply to the following:

1) Coating lines complying with Section 219.207(m)(1);

2) For metal parts and products coating operations: touch-up coatings, repair coatings, textured finishes, stencil coatings, safety-indicating coatings, solid-film lubricants, electric-insulating and thermal-conducting coatings, magnetic data storage disk coatings, and plastic extruded onto metal parts to form a coating;

3) For pleasure craft surface coating operations: extreme high gloss coatings;

4) For plastic parts and products coating operations: airbrush operations using 18.9 liters (5 gallons) or less of coating per year.

5) For ammunition sealant operations: cap sealants and mouth waterproofing sealants.

d) Subsections (e) and (g) do not apply to the following activities in which cleaning of aerospace components and vehicles may take place: research and development, quality control, laboratory testing, and cleaning of electronic parts and assemblies (except for cleaning of completed assemblies). Subsections (e) and (g) also do not apply to aerospace facility operations involving space vehicles or rework operations performed on antique aerospace vehicles or components. Subsections (e) and (g) also do not apply to aqueous cleaning solvents.

e) Except as provided in subsections (d) and (f), every owner or operator of an aerospace facility must:

1) Ensure that all fresh and used cleaning solvents, except semi-aqueous cleaning solvents, used in solvent cleaning operations are stored in containers that must be kept closed at all times except when filling or emptying;

2) Ensure that mixing and storage containers used for VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials are kept closed at all times except when depositing or removing these materials;

3) Ensure that cloth and paper, or other absorbent applicators, moistened with cleaning solvents are stored in closed containers (cotton-tipped swabs used for very small cleaning operations are exempt);

4) Minimize spills of VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials;

5) Convey VOM-containing coatings, thinners, coating-related waste materials, and cleaning materials from one location to another in closed containers or pipes;

6) Minimize VOM emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers; and

7) Apply all coatings using one or more of the following application methods:

A) Electrostatic spray;

B) High volume low pressure (HVLP) spray;

C) Flow coating. For the purposes of this subsection (e)(7)(C), flow coating means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle;

D) Roll coating;

E) Dip coating, including electrodeposition. For purposes of this subsection (e)(7)(E), electrodeposition means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created;

F) Brush coating;

G) Cotton-tipped swab application; or

H) Another coating application method capable of achieving a transfer efficiency equal to or better than that achieved by HVLP spraying, if the method is approved in writing by the Agency.

f) The application method limitations in subsection (e)(7) do not apply to the following:

1) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

2) The application of aerospace specialty coatings;

3) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the Agency has determined cannot be applied by any of the application methods specified in subsection (e)(7);

4) The application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 inch) and that the Agency has determined cannot be applied by any of the application methods specified in subsection (e)(7);

5) The use of airbrush application methods for stenciling, lettering, and other identification markings;

6) The use of hand-held spray can application methods; and

7) Application of touch-up and repair coatings.

g) Cleaning Operations at Aerospace Facilities

1) Hand-wipe Cleaning at Aerospace Facilities. Hand-wipe cleaning (excluding cleaning of spray gun equipment performed in accordance with subsection (g)(3)) must use cleaning solvents that meet the definition of aqueous cleaning solvent or have a composite vapor pressure of 45 mmHg (24.1 in. H2O) or less at 20 °C (68 °F).

2) The following cleaning operations are exempt from the requirements of subsection (g)(1):

A) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

B) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, hydrazine);

C) Cleaning and surface activation prior to adhesive bonding;

D) Cleaning of electronic parts and assemblies containing electronic parts;

E) Cleaning of aircraft fluid systems and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

F) Cleaning of fuel cells, fuel tanks, and confined spaces;

G) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

H) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the aircraft;

I) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

J) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

K) Cleaning and solvent usage associated with research and development, quality control, or laboratory testing;

L) Cleaning operations, using nonflammable liquids, conducted within 5 feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

M) Cleaning operations identified as essential uses under the Montreal Protocol for which the USEPA Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

3) Spray Gun Cleaning at Aerospace Facilities. Spray gun cleaning, in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned, must be cleaned by one or more of the following methods:

A) Enclosed System

i) Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning must consist of forcing solvent through the gun.

ii) Each owner or operator using an enclosed spray gun cleaner must visually inspect the seals and all other potential sources of leaks at least once per month. Each inspection must occur while the spray gun cleaner is in operation. If leaks are found in the enclosed system, the enclosed cleaner must be shut down until the leak is repaired or its use is permanently discontinued.

B) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. Atomizing air must not be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

C) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which must remain closed at all times except when in use. Alternatively, soak the components in a vat, which must remain closed during the soaking period and when not inserting or removing components.

D) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

4) Flush Cleaning at Aerospace Facilities. For cleaning solvents used in flush cleaning of parts, assemblies, and coating line components, the used cleaning solvent (except for semiaqueous cleaning solvents) must be emptied into an enclosed container or collection system that is kept closed when not in use or captured with wipers, provided they comply with the housekeeping requirements of subsections (e)(1) through (3). Aqueous cleaning solvents are exempt from these requirements.

(Source: Amended at 45 Ill. Reg. 3553, effective March 4, 2021)