



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

Kelsey Bonhivert, Compliance Manager
August Mack Environmental
1302 N Meridian Street, Suite 300
Indianapolis, Indiana 46202

Alic Bent, Senior Regulatory Expert
August Mack Environmental
1302 N Meridian Street, Suite 300
Indianapolis, Indiana 46202

RE: Request for Applicability Determination
King Systems Corporation, Noblesville, Indiana

Dear Kelsey Bonhivert and Alic Bent:

The U.S. Environmental Protection Agency (EPA) has received and reviewed a letter from August Mack Environmental (August Mack) on behalf of its client, King Systems Corporation (King Systems). The letter requests an applicability determination related to King Systems' solvent welding operations at its Noblesville, Indiana facility (the Noblesville facility). More specifically, August Mack has inquired as to the applicability of 40 C.F.R. Part 63, Subpart PPPP, the National Emission Standards for Hazardous Air Pollutants (HAP) for Surface Coating of Plastic Parts and Products (the Subpart PPPP Rule) to both existing and proposed Breathing Circuit assembly lines at the Noblesville facility. For the reasons discussed below, EPA has determined that the Subpart PPPP Rule does not apply to these lines.

August Mack Environmental's Request

In August Mack's May 7, 2020 letter, you stated that King Systems is currently operating eight Breathing Circuit assembly lines and proposing to construct six more at the Noblesville facility. You also state that the Noblesville facility is a major source of HAPs, which include methylene chloride (MeCl), which is used in each of the Breathing Circuit assembly lines to bond sub-assemblies of the circuits in a process called "solvent welding." Solvent welding is accomplished by applying solvent to polymer sub-assemblies to soften the polymer. The softened portions of the sub-assemblies are then pressed together and, as the solvent evaporates, the two sub-assemblies become conjoined as a single piece.

August Mack asserts that the Subpart PPPP Rule does not apply to the existing and proposed Breathing Circuit assembly lines for two main reasons:

1. The process of applying MeCl within the Breathing Circuit assembly lines does not meet the definition of "surface coating" in the Subpart PPPP Rule.

2. The compliance formulas within the Subpart PPPP Rule are not set up to execute properly when only solvents are used (no coating solids), as the emission limits are expressed as “lb organic HAPs per lb coating solids used”.

Analysis

Under 40 C.F.R. § 63.4481(a), the provisions of the Subpart PPPP rule apply generally to the surface coating of any plastic parts or products as described in paragraph (a)(1) of this section, which states that: “*Surface coating is the application of a coating to a substrate using, for example spray guns or dip tanks...*” Additional relevant regulations include:

The Subpart PPPP Rule at 40 C.F.R. § 63.4581, which defines “coating” as a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants...

The Subpart PPPP rule at 40 C.F.R. § 63.4581, which defines “adhesive, adhesive coating” as any chemical substance that is applied for the purpose of bonding two surfaces together...

The Subpart PPPP Rule at 40 C.F.R. § 63.4581, which defines “coating operation” as equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning)...

The Subpart PPPP Rule at 40 C.F.R. § 63.4581, which defines “coating solids” as the nonvolatile portion of the coating that makes up the dry film.

The Subpart PPPP Rule at 40 C.F.R. § 63.4490, which contains the emission limits.

August Mack asserts that the function of applying MeCl to the Breathing Circuit sub-assemblies is to soften the surface of the polymer, allowing the joining sub-assemblies to harden as one single piece as the solvent evaporates completely. August Mack states that this “is distinct from applying an adhesive that cures in place to hold components together.”

As noted above, the definition of “coating” specifically includes adhesives, which is further defined to include “any chemical substance that is applied for the purpose of bonding two surfaces together.” Because MeCl is applied for the purpose of bonding two surfaces in the Breathing Circuit assembly lines, King Systems is conducting “surface coating” at the Noblesville facility.

With regard to the applicable emission limit under 40 C.F.R. § 63.4490, it depends on the mass of coating solids that will be used over a 12-month compliance period. As noted above, coating solids are defined in 40 C.F.R. § 63.4581 as the nonvolatile portion of the coating that makes up the dry film. EPA understands from August Mack’s May 7, 2020 letter that King Systems will

continue to apply only MeCl, with no nonvolatile chemical additives in the MeCl solvent welding process. Hence, no coating solids are involved in the process and no residual dry film remains after the process. In light of the Subpart PPPP Rule's dependence on the mass of coating solids for determining an emission limit, the absence of any coating solids from King Systems' MeCl solvent welding process precludes the determination of an appropriate emission limit under 40 C.F.R. § 63.4490. Therefore, it is inappropriate to apply the provisions of the Subpart PPPP Rule to the MeCl solvent welding operation at King System's existing and proposed Breathing Circuit assembly lines.

Accordingly, EPA Region 5, in consultation with the Office of Enforcement and Compliance Assurance and the Office of Air Quality Planning and Standards, has determined that the King Systems Breathing Circuit assembly line MeCl solvent welding operations described in August Mack's May 7, 2020 letter are not subject to the Subpart PPPP Rule.

If you have any further questions, please contact Paymon Danesh of my staff at (312) 886-6219 or danesh.paymon@epa.gov.

Sincerely,

 Digitally signed
by PAMELA
BLAKLEY
Date: 2020.06.16
16:38:30 -05'00'

Pamela Blakley
Acting Chief
Air Programs Branch

cc:

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