

Is maintenance touch-up painting covered under 63.745 GG?

Question: Is this facilities touch-up painting operation covered under 63.745 or exempt as a speciality coating?

for the purposes of this example, assume that the regulatory authority has approved the facilities request that the maintenance operations performed on the south end of the facility be classified as touch-up and repair operations

Facility ABC is a military base where maintenance, repair and rework operations are performed.

Rework operations are performed on the north end of the base. Rework operations consist of major reconstruction and overhaul (e.g. stripping, painting and priming of entire aircraft) of military jet aircraft and helicopters. All painting and priming is performed in a enclosed area where compliant two stage filters have been installed.

The aircraft operations area is on the south end of the base. This operational area consists of flightline activities (take-off, landing and refueling) and aircraft maintenance activities. Aircraft maintenance (sanding, painting, priming) is performed in a non-ventilated hangar. Maintenance is performed only on those areas where a pre-flight inspection has found evidence of corrosion or where corrosion was found during the 54 day aircraft maintenance check. Repair areas usually account for less than 10% of the aircraft per year. The facility has a total of 125 aircraft. Major overhauls or repainting of the entire aircraft is performed at the rework facility on the north end of the base. Aircraft are usually scheduled for rework every three years.

Answer: This facility is subject to 63.745 for all of the following reasons:

- the EPA did not intend to exempt touch-up and repair operations at maintenance and rework facilities under the specialty coating definition. The intent of the specialty coating definition was intended for touch-up operations where minor coating imperfections are corrected after the main coating operation. For example, a newly manufactured aircraft that requires a scratch or nick to be fixed prior to the sale of the aircraft would fall under this category.
- maintenance operations as describe above are included in the section 63.742 definition of touch-up and repair since the painting being performed appears to be an "incidental application of coatings" as opposed to "correcting minor coating imperfections." The operation also appears to be an "out-of-sequence" or "out-of cycle operation" which is included in the 63.742 definition of "touch-up and repair operation."

What the rule says: Final (Amended) Rule, February 10, 1998 [Red-line/Strike-Out version]

63.741(f) [*applicability*] states “This subpart does not contain control requirements for use of specialty coatings...”

Appendix A, specialty coatings defines “Touch-up and repair coating” as “a coating used to cover minor coating imperfections appearing after the main coating operation.”

63.742 [*definitions*] defines “Touch-up and repair operation” as that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of cycle coating.”

63.745(f)(3)(iv) [*primer and topcoat application, organic HAP*] states that the following is exempt from the application technique requirements in 63.745(f)(1):

“touch-up and repair operations”

63.745(g)(4) [*primer and topcoat application, inorganic HAP*] states that the following are exempt from 63.745(g)(1)-(3):

“touch-up of scratched surfaces or damaged paint”

“touch-up of trimmed edges”

“touch-up of bushings and other similar parts”

What the final BID says: BID for promulgated standard, July 1995

Please see the entire BID documents for more details. The information below provides excerpts only.

Chapter 4

Section 4.29, Touch-up and repair operation

Page 4-26, Response: The EPA agrees that the total area of touch-up on a given vehicle could be difficult to estimate and verify. . . The EPA believes that its description of what constitutes touch-up is sufficiently general to cover any situation. Out-of-sequence coating has also been included in the definition to exempt this type of operation from the requirement to use certain specific application techniques. The final definition reads as follows:

“Touch-up and repair operation means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence coating.”

Page 4-25/4-26, Comment: Commenters IV-D-27, IV-D-29, and IV-D-37 suggested that the proposed definition of “touch-up and repair operation” should be revised. The commenters noted that the proposed definition would limit permissible touch-up and repair painting operations to a

total area not to exceed 4 square feet per aerospace vehicle . . . Moreover, the commenters claimed that the same considerations apply equally, if not more so, with respect to aircraft maintenance activities in which components of an aircraft must be spread throughout a large and decentralized maintenance facility for simultaneous rework and repair. The commenters claimed that, because in-service daily-use commercial aircraft sustain damage far in excess of that encountered during initial assembly and flight testing, the 4 square foot limitation for touch-up and repair painting is unduly restrictive for maintenance facilities, particularly with regard to large passenger aircraft, such as Boeing 747's and DC-10's. The commenters recommended that the 4 square foot limitation be eliminated from the definition of "touch-up and repair operation," stating that the terms of the definition itself will effectively limit the extent to which such exempted painting operations may be employed.

Commenter IV-D-39 stated that, while they support the proposed exemptions from the primer and topcoat operations standards, the definition of touch-up should be revised to read as follows "(1) Touch-up, including, for example, repair of scratched surfaces or damaged paint..." According to the commenter, since "touch-up" applications may be appropriate for areas that would not be described as "scratched" or "damaged" (e.g., for improved aesthetics), this definition is overly restrictive. The commenter believes that, rather than attempting to cover every conceivable type of touch-up, it is better to make the types of applications illustrative rather than restrictive, leaving it to the regulator and the source to determine what constitutes touch-up in actual operation.

Comments were also received (IV-E-2) that some painting operations may be performed in nonstandard locations (such as in flight areas), and these "out-of-sequence" coating operations should be exempted from the requirement to use certain application methods.

Section 4.32.6, Maintenance Painting

Page 4-30, Response: It was not the EPA's intent in these standards to exempt routine painting operations performed in reworking (maintaining and repairing) aerospace vehicles or components. Therefore, this definition has not been added to the final rule.

Page 4-29/4-30, Comment: Commenter IV-D-35 recommended that the following definition for "maintenance painting" be added to the rule:

"Maintenance painting means painting operations after non-destructive inspection (NDI), corrosion rework, composite replacement, metal panel replacement, aerospace vehicle modification, panel access, or other maintenance activities to insure aircraft structural integrity."

The commenter proposed that the above definition is necessary since maintenance painting should be exempt from the rule.

Chapter 6

Section 6.9, Touch-up and Repair Application Operations

Page 6-34/6-35, Response: The EPA believes that the commenters' recommendations with respect to "maintenance painting" are too broadly defined and would encompass many of the activities the EPA intends to regulate. . . Therefore, the EPA will not add the recommended definition to the rule or exempt maintenance painting from the rule . . . The EPA has revised the definition as follows:

"Touch-up and repair operation means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence coating."

The EPA has added **out-of-sequence** coating to the definition to allow facilities to use any type of application method for this type of operation. This addition does not, however, allow the facility to freely use the touch-up and repair operation exemption to recoat an entire aircraft on the flightline without using controls. The exemption was incorporated in the rule to allow facilities to apply coating to small areas (4 ft² in the proposal) of the aircraft without being constrained to a particular type of application method. The EPA understands that 4 ft² is not adequate for some of the larger aircraft and will allow the permitting authority to determine what constitutes a touch-up and repair operation."

Page 6-30/6-31/6-32, Comment: Commenter IV-D-35 stated that overhaul and repair operations are called "maintenance painting" and are inappropriately given the same MACT standards as full aircraft primer and topcoat applications. The commenter stated that maintenance painting means painting operations after non-destructive inspection (NDI), corrosion rework, composite replacement, metal panel replacement, aircraft modification, panel access, or other maintenance activities to insure aircraft structural integrity. The commenter pointed out that the proposed rule does not recognize or distinguish this type of painting.

The commenter suggested that maintenance painting is an important maintenance tool for ensuring both airworthiness and operational readiness of aerospace vehicles. Commenter IV-D-37 pointed out that Airworthiness Directives ("AD's") issued by the Federal Aviation Administration may mandate, for purposes of aviation safety, that aircraft components or systems be inspected, replaced, or repaired on a time-critical basis. . . The commenter concurred with AIA's recommendation that an exclusion for permissible maintenance painting limited to 10 percent of the exterior surface of an aerospace vehicle per year would constitute a reasonable and adequate control mechanism.

. . . Since maintenance painting operations were not analyzed during the development of the proposed NESHAP, there is no basis for establishing a MACT floor, other than no control.

The commenter stated that touch-up and repair painting supports aircraft aesthetic repairs and coating system longevity on the outer mold line of the aircraft, while maintenance painting supports

aircraft structural integrity during aircraft overhaul and repair operations.

According to commenter IV-D-35, touch-up and repair painting can potentially be accomplished in a paint hangar or booth with emission controls (the aircraft is mobile); however, most locations where aircraft are stationed do not have a paint hanger (80 percent estimate for DoD), and touch-up and repair painting is typically "out of cycle" or non-scheduled painting. The commenter claimed that because emission controlled hangars have low availability (fully scheduled), it is difficult to schedule out-of-cycle touch-up and repair operations. Therefore, the commenter pointed out that touch-up and repair is usually accomplished in facilities without emission controls.

Chapter 6

Section 6.12.3, Hangar Use

Page 6-52, Response: The EPA accepts the commenters' recommendation because it gives facilities an opportunity to define operations that would have minimal emissions. The EPA does not intend to regulate minimal emissions. The EPA also does not intend to force emissions control on operations that have minimal impact on a facility-wide basis. Therefore, §63.745(g)(4)(ix) states:

"Painting parts in an area identified in a title V permit, where the permitting authority has determined that it is not technically feasible to paint the parts in a booth."

Page 6-52, Comment: Two commenters (IV-D-2, IV-D-23) stated that there are situations during assembly where aerospace components cannot be reasonably moved into a spray booth for coating. The commenters stated that it is not practical to move a large subassembly into a paint hanger for a small coating operation and since the amount of coating applied is relatively small and occurs in a large building, there is little chance of inorganic HAP being released to the ambient air. The commenters recommended that the rule provide flexibility to the permitting agency to exempt in the title V permit those circumstances where it is not technically feasible to paint in a booth by including an exemption to be included in §63.745(f) which allows "painting in an area identified in a part 70 permit, where the permitting authority has determined that it is not technically feasible to paint in a booth."