EASTERN RESEARCH GROUP, INC.

MEMORANDUM

TO: Kim Teal, U.S. EPA

FROM: Brian Palmer and Mike Heaney, Eastern Research Group, Inc. (ERG)

DATE: August 6, 2004

SUBJECT: Summary of the observations made at McJack's Corvettes, Inc., a small collision repair and restoration shop, in Santa Ana, CA, visited on June 23, 2004.

FACILITY CONTACT: Mr. Jack Grubisich, Owner
McJack's Corvette
411 S. Harbor Blvd.
Santa Ana, CA 92703
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INTRODUCTION

From June 22 to June 24, 2004, Kim Teal (U.S. EPA), Brian Palmer (ERG), and Mike Heaney (ERG) visited several automobile refinishing facilities in the Los Angeles, CA metro area, and were accompanied by Mr. Fred Lettice of the South Coast Air Quality Management District (SCAQMD). The facilities visited are involved in the refinishing of automobiles. Two of the facilities visited primarily did car restorations. The remainder of the facilities were primarily involved in refinishing as associated with collision repair or "spot painting."

These facilities were visited to collect information on how they complied with the SCAQMD's Rule 1151, Motor Vehicle and Mobile Equipment Non-assembly Line Coating Operations, including their record keeping practices, what types of compliant materials they were using, and their overall work practices and how they relate to the release of hazardous air pollutants (HAP). The information collected will be used to develop national regulations for the automobile refinishing industry under section 112(k) of the Clean Air Act.

FACILITY DESCRIPTION

McJack’s Corvettes (McJack's) restores and repairs Corvettes exclusively. McJack’s also buys vintage and late model Corvettes and restores them to be resold at this location. McJack’s has been in business here since1984. Mr. Grubisich does all of the painting and much of the refinishing work himself.

This facility refinishes about 2 whole cars per week and repairs 2 to 4 collisions per week. About half the work done at McJack’s involves insurance. They also restore engines and vehicle interiors at this shop.

Since their introduction in the 1950's, Corvette bodies have been made of fiberglass. Only about 20 percent of the cars worked on at this location involve fiberglass work. Except for very small repairs, Mr. Grubisich does not cut into the fiberglass to make repairs. It is more common to replace panels or sections of the body than to repair damaged panels. Replacement panels are available from several manufacturers. He virtually never uses woven fiberglass cloth to patch body panels because the woven pattern shows through in the final paint finish. Typically he patches only along seams using non-woven fiberglass mat with frayed edges, instead of woven cloth. To saturate the cloth he uses catalyzed, liquid-polyester resins manufactured by Fibre-Glass Evercoat and containing about 35 to 45 percent styrene, which is both a VOC and a HAP. However, only a fraction of the available styrene is emitted since it is a cross-linking agent in the polyester resin. According to the MSDS for these materials, the actual VOC and HAP emissions are about 0.44 pounds per gallon. Mr. Grubisich buys this material by the gallon and estimates he uses about one gallon per month.

To bond fiberglass panels together, Mr. Grubisich uses a filled, catalyzed, polyester resin adhesive known as Vette Panel Adhesive and manufactured by Fibre-Glass Evercoat. The material contains 10 to 15 percent styrene. According to the MSDS for this to material, actual VOC and HAP emissions are 0.51 pound per gallon of material. To fill the surface he uses a hard and then a softer filled polyester resin material; these are also manufactured by Evercoat and contain 10 to 15 percent styrene. Styrene emissions are about 0.60 pound per gallon. he estimates that he uses about one gallon per month of the filler compounds. Each layer of filler is sanded (“blocked out”) to yield a final surface. After application of the primer coat, refinishing

fiberglass is no different than refinishing conventional steel auto bodies, according to Mr. Grubisich.

COATING OBSERVATIONS

McJack's uses Diamont and Glasurit coatings by BASF in a downdraft spray booth. Overall, more time is spent on painting, including preparation, than on fiberglass repair. On average, McJack's uses about one quart of paint per day. Paint usage is tracked using a simple paperwork system. This facility does not have a separate paint mixing room or a large inventory of toners and binders. Mr. Grubisich buys his colors already mixed by the jobber. McJack's is not a member of the Automotive Service Association or other trade group.

Mr. Grubisich commented that not all of the rules for large shops should apply to small shops. He also expressed a desire for regulatory agencies to bring shops that ignore environmental regulations into compliance.