



District School Board of Pasco County

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Summary of SES Carpet Cleaning Test

The purpose of the cleaning tests at Schrader Elementary School was to determine a way to solve a variety of carpet cleaning issues that are experienced each year in Pasco County Schools. These issues vary from severe wick back (browning of the carpet) to streaking, and the inability to remove spots and achieve an acceptable appearance.

Pasco County Schools requested the assistance of Collins & Aikman carpet manufacturing as their carpet is used in a large percentage of the Pasco County Schools. They were instrumental in getting the representation of the different types of cleaning methods to assist us in the testing. I have put together a Power Point Presentation of the events to assist in the evaluation process as well. This will be available upon request to anyone wishing to view it.

All the cleaning methods except one were done as a restorative (worst case) situation. Whittaker offered another method in addition to the restorative method referenced as a Maintenance Cleaning Method. Each method of cleaning was done by their respective cleaning experts and no Pasco County School Board employees were involved in any of the cleaning procedures.

All involved parties met at the school and accepted the test site. All agreed that the area was equally soiled through out the test area thus giving no advantage to any one test site. The group was very friendly and I was surprised to find that this type of testing had never been done quite this way in an on site and multi vendor testing. Everyone was learning first hand of the other s' methods right before their eyes.

Test areas were photographed at different powers of magnification before and after cleaning to gather data regarding the effectiveness of each method in removing sand and debris from the fibers of the carpet.

Each of the areas looked clean and acceptable to the naked eye after their respective cleaning methods. Only one was ready for use immediately after cleaning. The others required two to six hours of time to dry depending on the AC system and free air movement provided by fans. This amount of dry time required is of considerable importance to Pasco County Schools. In fact it is one of the reasons carpet is not cleaned as often as is needed in our schools.

On day two of the test, all areas were tested for moisture and were all declared to be dry. None of the areas had any signs of streaking or wick back (browning). This tells us that everyone did it right. The equipment was operating correctly and the operators were trained in the correct procedures. I mention this only to bring out the point that in the educational setting there are many different levels of skilled labor. There is a high probability that we cause many of our carpet problems. This is due to the level of skill required in some of these cleaning methods

A post vacuuming of all areas was performed as is recommended by most if not all cleaning methods in use today. The areas were photographed again for evaluation and the real test started. Over the next four weeks these areas were evaluated on their appearance.

The only care the test areas got was daily vacuuming and spot cleaning if needed (much like real life care in schools). I took weekly pictures of the test areas to evaluate how quickly the areas would regress to their original look. The pictures do show a dramatic change at the end of week four but you could see less dramatic changes after week two.

I can only speak for the Pasco County School System in relation to recommending a method of cleaning carpet in schools. Other school systems may have better trained labor and may clean carpet more often or even have specific carpet cleaning crews. Drying times with associated IAQ issues and electrical costs may not be as large an issue in other areas of the state. The following conclusions are a consensus of the Pasco County Plant Manager Association Executive Committee

The Low Moisture Absorption Method (HOST) is viewed as superior for the following reasons

- A. **No drying time after cleaning.** We have experienced many IAQ issues due to AC systems not working long enough to get the carpet dry. Carpet can be cleaned at anytime and put back into use immediately. Carpet in a classroom where the class is out to lunch could be cleaned before they returned to the room.
- B. **Limited set up and clean up time.** There is no water to move around or dispose of in the process and only one piece of equipment is needed to do the entire process. Truck units are expensive to maintain and water qualities vary from site to site. There are no jets to unclog or pumps to repair as is with other systems. The water issue has become a much larger factor as water quality changes from school to school. We have identified water quality as a contributing factor in the re-soiling of carpets. The Host System requires no extra water to be added to the carpet.
- C. **Cost of operation.** This can be argued from many different viewpoints depending on the facts you choose to include. From our hands on experience using all of the tested cleaning methods and the test data. We have concluded that the HOST cleaning system will provide Pasco County Schools with cleaner carpet at a lower cost of operation. This conclusion is based on labor costs and level of training needed, frequency of cleaning needed, total equipment and material costs and energy costs to the District School Board of Pasco County.
- D. **Ease of operation and operator fatigue.** This is based on the total number of machines used and the time each is used in each cleaning method. Host uses only a single machine to clean carpet while all the other methods required at least two machines and most required water to be carried to the area and disposed of later.

E. IAQ factors - Host is the only carpet cleaning system that has proven through years of published, peer reviewed, scientific studies that it removes (extracts), and reduces mold spores, dust mites and other allergens in carpet significantly. As is stated in their literature "Research studies have shown that ONE cleaning with the HOST System using HOST machines reduces: Mold Spores by 85%; Dust Mites by 78%; Dust Mite Allergen by 75%; Cat Allergen by 85%." They carry an EPA registration (EPA Establishment No. 074202-WI-001) which allows them to make these claims. Any manufacturer making claims of removal of biological materials from the carpet must be EPA registered and to my knowledge, no other manufacturer carries this EPA registry. IAQ issues are a very significant factor as carpets are often the target of many IAQ investigations in our schools.