



Eden Prairie Public Schools

Vacuum Cleaner Study

Conducted by:

Institute for Environmental Assessment, Inc.

and the

**University of Minnesota
Environmental Health & Safety Division**

Authored by:

Leslie Henckel, Institute for Environmental Assessment, Inc.
Neil Carlson, University of Minnesota
Andy Streifel, University of Minnesota
Arif Quraishi, Institute for Environmental Assessment, Inc.

If you have any questions or comments about the Study
please contact Arif Quraishi at 612-535-7721 or e-mail at arifq@ieainstitute.com.

Conclusions & Recommendations

Of the floor models tested under the conditions described, the Lindhaus Health Care was the best performing model. This vacuum had good particle removal and generated the fewest airborne particles. The NSS Outlaw Back Vac was the top-performing backpack model. It combined low noise generation with the lowest airborne particle generation of the models tested.

This study rates seven vacuum cleaners in terms of their performance in collecting dirt from carpet, in limiting the resuspension of fine particles into the air, in not damaging carpet, and in noise levels produced during vacuuming. Although vacuum cleaners may be purchased on the basis of these results, other factors should also be considered including:

- ◆ how the vacuum cleaners will be used,
- ◆ ergonomics,
- ◆ cost, and
- ◆ durability.

For example, the choice between a floor and backpack model may depend on whether the vacuum cleaner will be used for detail work or open areas. The operator of the vacuum cleaner is also important to consider (Tom, 1999). Manual height adjustments can increase the suitability of a vacuum cleaner for a wide range of body sizes and types. A smaller custodian may need a lighter or smaller vacuum cleaner. Also, the heat output of some models, especially the backpacks, may be of concern if vacuuming is done in warm or small spaces.