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October 15, 2004

Mr. Jim Sand
Program Director
Oak Ridge National Laboratory
Building 3147, MS 6070
1000 Bethel Valley Road
Oak Ridge, TN, 37831-6070

Dear Mr. Sand,

I am writing this letter on behalf of Cobb County Schools to thank Oak Ridge and the Department of Energy for co-funding the retrofit installation of the SEMCO Revolution system at our Timber Ridge Elementary school.

As you are aware, prior to the installation of the new system we had experienced numerous IAQ problems at this school. Specifically, the existing HVAC system would not allow the introduction of any outdoor air without resulting in humidity problems. These problems have been serious and have included both comfort and microbial (mold) problems over the years.

To address these problems, the outdoor air dampers of the existing rooftop units had to be closed and commercial dehumidifiers installed in many of the classrooms. This approach improved our humidity problems but resulted in IAQ and comfort complaints, non-compliance with the ventilation code and high energy costs.

The Revolution system was installed to replace one of the larger air handling units serving the section of the school that had experienced most of the IAQ and humidity problems. This area involves approximately 10,000 square feet of space made up of eight classrooms, four hallways, four teacher rooms, two rest rooms and several storage areas.

The Revolution system is operated as a VAV system serving 19 zones. It processes both the outdoor air and return air loads, and does so without any reheat in the VAV boxes.

The Revolution system was easily installed over one weekend by our service department in conjunction with SEMCO personnel. As Energy Manager for the school district I am especially impressed that despite the fact that the unit now delivers the amount of outdoor air required by code and delivers excellent temperature and humidity control (all of which have been monitored), the energy consumption of this system is far less than that used by the conventional packaged unit that it replaced. In fact the same electrical and gas feed that served the original unit was used for the new system.

The Revolution system has now operated over one heating season, one cooling season and one summer shutdown. We have experienced excellent IAQ and comfort conditions at all times. The reliability of the system has also been excellent and it integrated perfectly with our current DDC control system.

As you may recall, we initially had concerns regarding the use of another active desiccant system since we had to remove several such systems from our schools over the years due to odor carryover problems. The testing conducted as part of this program by Georgia Tech prior to the installation eased the concerns stressed by our Superintendent. Subsequent air quality testing completed at Timber Ridge by Georgia Tech has confirmed that the indoor air quality in the areas served by the new system has been improved significantly and is now very acceptable. Most importantly, the teachers are very happy with the new system.

The results of this retrofit have been so positive that we now pressured to address the remainder of the school. Unfortunately, like many school districts we are under a very tight budget this year so we have not yet been able to fund a program to replace the rest of the rooftops with Revolution systems. However when funds do become available we hope that we will be able to do so.

I am happy to be able to provide such positive feedback to DOE for this pilot program. The new technology has proven to be an excellent system that enables schools to provide a cost effective way to meet the ventilation code requirements, control space humidity and minimize operating costs.

If I can answer any questions that you may have please feel free to contact me directly,

Sincerely,



Gene Trull
Cobb County Schools
Maintenance Supervisor/HVAC

Cc: Steve Daniel