August 31, 2011

Davidson County Community College

Archdale, NC

Ref: Site Visit Report

Dear Jimmy and Randy:

This is to summarize what Mike and I found out about the welding booths and dust collection system on our site visit to Davidson CCC.

Observations:

1. There is a negative pressure problem. About 18,000 CFM is being exhausted and there is no return air into the building. It is being pulled around the doors and any open spaces.

2. One welding booth was not connected because it is being replaced.

3. The front room where the duct runs through there are 4” diameter ports that are open.

4. When the roll up door is opened to let the return air in, it causes the curtains in a couple of booths to “flap”. This makes it hard to weld in the booth.

5. When Jimmy was welding in the booth all of the smoke was being exhausted through the welding booth.

Notes on the observations:

1. To alleviate the negative pressure problem, return air must be brought back into the building. This can be done by either filtering the exhaust air from the fan or returning it into the building through diffusers or by having ambient air be brought in through diffusers. If you filter the air then you do not lose your tempered air. If you bring in ambient air then it may cause the building to hotter or colder depending on the ambient temperature.

2. As of 8/30/11 the booth was replaced and reconnected to the ductwork system.

3. The 4” ports have to be closed up as they are taking away air from the booths.

4. By bringing in the return air at a slower velocity, it will stop the curtains from “flapping”. Return ductwork with diffusers is needed to return the air at a lower velocity.

5. We will need to do a complete balance of the welding booth / dust collector system. We will have to have the 4” ports closed off and adjust the slots before taking readings. Also, the roll up door will have to be fully open as not to affect the curtains in the booths.

The welding we watched showed the welding booths exhausting all of the smoke. Once adjusted we will perform another welding demonstration to see how the booths perform.

Other Notes:

A. Once the 22” deep slotted shelves arrive we will install at no charge.

B. Once the adjustable curtain rod brackets arrive we will install at no charge.

C. We will redirect the air exhaust air to blow on top of the roof at no charge.

D. We will balance the system as per our contract.

Please let me know if you have any questions or comments.

Sincerely,

Bob Venezia / Project Engineer

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