February 13, 2012

Johnson Controls

76 Armstrong Road

Battle Creek, MI 49037

Dave Simet

Ref: Robotic Cell

Dear Dave:

 It was good to meet you last week and review the robotic weld cells. After reviewing the operation of the collector and cell operation, we have come up with the following to determine how much airflow is needed to evacuate the robotic cell.

1. We will provide an Exhaust fan (10,000 CFM) and a variable frequency drive. This will allow us to determine how much CFM is required to evacuate the robotic cell.

2. We will provide ductwork from existing ductwork to the exhaust fan. Johnson Controls to connect the ductwork to the exhaust fan. We will need a maintenance technician to assists us in connecting the ductwork to the fan.

3. Johnson Controls to run power to the VFD and from the VFD to the exhaust fan. The exhaust fan motor is a 20 HP 460 volt 3 phase. The full load amps are about 28 amps.

4. Once power is ran to the fan, we will come out make final ductwork connections and test to determine the CFM needed to evacuate the robotic cell.

By using the VFD we can dial in the correct amount of airflow needed. Testing should take about half a day.

5. We have the current CFM (3500) that the collector is evacuating. We will use this as a baseline. Currently, there are 3.8 air changes per min (3500 CFM / 918 cubic ft).

6. For future booths the evacuation points will be located above the welding area and at the back of the cell.

 We have ordered the exhaust fan today with a rush on it. It will ship on 2/28/12 from Ohio. It is a one day point to your facility. The VFD and ductwork can be shipped by the 28th as well. We can come out the week of March 5th to perform the testing. Please let us know if this date works for you or what date is better?

Sincerely,

Bob Venezia

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