



SAINT-GOBAIN
PERFORMANCE PLASTICS

October 17, 2007

Bill Drake
Stingray Energy Systems, LLC
1550 Douglas Drive, Suite 217
Charleston, IL 61920

Subject: Retrofit Lighting Project

Dear: Bill,

I need to take the time thank you and your team for the outstanding success of our plant lighting retrofit project. The executive summary version is that we will save over \$25,000 per year on our utility costs and the lighting in the plant is literally double the foot candles. The soft benefits from better lighting are huge – higher quality, more productivity and a safer work environment. And, the plant looks great and is a place we are proud to show our clients. The State helped with the installation costs so that the pay back is less than two years.

Background

Several months ago, we received a recommendation to talk with Stingray about our lighting situation. We have a 100,000 square foot plant that does precision machining of parts that go into critical uses like aerospace and medical applications. To maintain higher tolerances, we air condition the plant to $72^{\circ} F \pm 4^{\circ}$. There were 191- 400 watt standard metal halide fixtures with metal reflectors and lenses and we were only getting 15 to 20 foot candles of illumination around the equipment which necessitated a work bench with task lighting at each machine. We were also concerned about all the heat being put off by the 400 watt fixtures and the energy consumption it was taking to cool the plant. Our electric bill was going up more than \$20,000 a month in the summer so, we need to save costs.

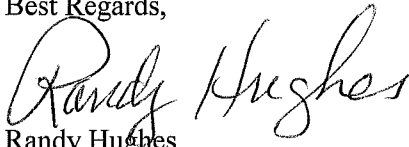
Research

A lighting project will last for years, so we wanted to make sure we made the correct decision. We have rows of Metal Halide fixtures with the emergency lights converted to high output T5 fluorescent fixtures. The HO T5's are an eyesore with yellowing bulbs and fixtures which are never quite straight. Maintenance also hates to change the bulbs and the fixtures are so fragile. So, from a cosmetic standpoint, we eliminated HO T5's even though they seem to be the favorite of the retrofit industry. We initially installed four Stingray aluminum fixtures that were open but with only 250 watt Pulse Start lamps to test the concept of better lighting with lower wattage lamps. It may seem counterintuitive, but the results were immediately impressive – more light from a fixture with a smaller lamp source. As per our corporate requirement, we got additional proposals from other brands. We also talked with our local utility and checked out their test center and spoke with other plants. We learned that a glass or acrylic fixture is more efficient than aluminum and installed several more test fixtures. We realized that with the greater efficiency and light dispersion from a glass or acrylic fixture over aluminum, we had an opportunity to eliminate some fixtures and still improve the illumination in the plant.

Results

We finally decided on the Stingray 250 watt PS metal halide fixture as the design was superior to the competition, and the low weight & adjustability allowed us to just swap out our current lights. We are in earthquake country, so the last thing we needed was heavy glass fixtures swinging 16 feet in the air. We carefully reviewed the layout and we were able reduced the total number fixtures from 191 down to 156 for an 18% reduction. We presented our project for state rebate funds and received nearly 20% off of the total cost of the project. The installation went smoothly and we were able to recycle many of the parts from the old fixtures. Now our plant literally glows and the illumination levels are over 40 foot candles in most areas. The machinists state that they can see the surface finish of their parts at the machine and don't have walk over to their task benches. There is nothing but positive comments from our employees and our customers, and I am a hero for doing the retrofit project. I thank you and your team for doing such an outstanding job.

Best Regards,

A handwritten signature in cursive script that reads "Randy Hughes". The signature is written in black ink and is positioned above the printed name.

Randy Hughes
Manager, Facilities and Materials
714-238-1324