



## Mpower Major Project Worksheet

Updated 08/26/2009 - Version 1.1

<b>Project Name</b>	Installation of Carbon Filtration Air Handlers on 350R UV printers	
<b>Project Manager</b>	Obasi Torti	
<b>Primary Stakeholder(s)</b>	Improve Energy Efficiency	
<b>Project Description / Statement of Work</b>		
Commission the design of carbon filtration air handlers and implement them on 2 350R UV printers. These will replace current ventilation system which exceeds ventilation needs, and exhausts treated air from the building equivalent to ~\$17,000/year in heating/cooling costs.		
<b>Business Case / Statement of Need</b>		
In 2009, GBP is undertaking a plant redesign that will result in 7 Cell Lines crafted for specific workflows. The last of these lines to be set up is the one using our 2 350R UV printers. We have not been able to move them yet, as we first needed to recreate the ventilation system used to address particulate matter and ink fumes. The current system is large and very costly to move or recreate as it requires drilling large holes in the exterior of the building. Our energy audit with Focus on Energy showed that we were over-exhausting, and that a contained filtration system could work without venting any treated air from the building. This would save great expense in building the new ventilation system, as well as save ~\$17,000/year in energy costs.		
<b>Project Definition</b>		
<b>Project Goals</b>	<ul style="list-style-type: none"> <li>- Implement contained filtration system for 350R printers.</li> <li>- Move 350R printers without creating holes in the building</li> <li>- Cut energy costs by \$17,000/year</li> <li>- Cut carbon emissions by 250,000 lb./year</li> </ul>	
<b>Project Deliverables</b>		
<b>How will progress be measured?</b>	Progress will be measured in several steps: <ul style="list-style-type: none"> <li>- Air quality needs identified and carbon filtration system designed successfully.</li> <li>- 350R printers moved to new location and carbon filtration system installed successfully.</li> <li>- Monthly energy costs drop an average of \$1400.</li> </ul>	
<b>Expected environmental benefits</b>	Each year that this filtration system is in place, GBP will save 21,600 therms of natural gas used to heat/cool air. This equals 254,016 lbs of carbon each year.	<b>Quick Conversion Factors</b> <ul style="list-style-type: none"> <li>• 2.22 lbs CO<sub>2</sub> / kWh saved</li> <li>• 11.76 lbs CO<sub>2</sub> / therm saved</li> <li>• 4.4 lbs CO<sub>2</sub> / 1000 gallons water</li> <li>• 19.56 lbs CO<sub>2</sub> / gallon of gas saved</li> </ul>
<b>Project Constraints / Risks / Key Inputs</b> <i>(Elements that may restrict or place control over a project, project team, or project action; results from other projects or input from other sources needed for project to be successful)</i>		
GBP worked with Rick Pettibone at Focus on Energy, and Larry Sabel with SES Group on this project. Our plan to move the 350R equipment was held up by several months in order to assess the proposed filtration system, measure energy usage with current system, apply for incentives through FOE, and wait for the new system to be custom manufactured. Furthermore, production demands on this print equipment limits the window of time in which we can move the equipment.		
<b>Implementation Plan / Milestones</b> <i>(Due dates and durations)</i>		
<ul style="list-style-type: none"> <li>- Assess energy usage/waste with current exhaust system: May 2009</li> <li>- Assess feasibility of carbon filtration system: June 2009</li> <li>- Obtain quote for new filtration system, including estimated energy/money savings: July 2009</li> <li>- Apply for Focus on Energy Incentives: July 2009</li> <li>- Install new filter on 1 350R for testing: August 2009</li> <li>- Move both 350R printers to new location and install both carbon filtration systems: September 2009</li> <li>- Measure air quality, printer performance, and energy savings: September 2009 – December 2009</li> </ul>		
<b>Communication Plan</b> <i>(What needs to be communicated? When is communication needed? To whom? How?)</i>		
Once filters are in place, production and maintenance staff will have a demonstration of the filtration system. Maintenance staff will be shown how to perform any standard maintenance and general repairs. Green Team representatives will monitor energy use and report back to management regarding savings.		

**Change Management / Issue Management** *(What is process for addressing concerns of those impacted? How decisions will be made? How changes will be made?)*

No issues with management. Owners are excited about this project and thrilled with the ROI (less than 1 year). Decisions and changes necessary were researched by Obasi Torti, reported to team, and worked out based on recommendations from FOE and SES, and production demands.

**Project Team Roles and Responsibilities**

Obasi Torti	Project lead	Work with FOE and SES to determine specs for filtration system; schedule installation and movement of equipment; document this process via email.
Alice Torti	COO, Management Representative	Apply for FOE incentives, approve invoices, project oversight.
Matt McDaniel	UV Printer Maintenance Supervisor	Facilitate equipment move and filtration system installation; learn maintenance and repair techniques for new system
Carolann Puster	Green Team Representative, Mpower Coordinator	Track energy savings post equipment move/filtration system install; ensure staff is education regarding new system.

**Sponsor Sign-Off**

\_\_\_\_\_ Date: \_\_\_\_\_