



**Earth Care Products, Inc.**

800 North 21<sup>st</sup> Street  
Independence, KS 67301  
Phone 620-331-0090 Fax 620-331-0095  
E-mail: [ecpi@ecpisystems.com](mailto:ecpi@ecpisystems.com)  
Website: [www.ecpisystems.com](http://www.ecpisystems.com)



**ACTOF® torrefied wood chips produced by ECP's start-up crew  
in licensee's ACTOF® Pilot Plant on April 30, 2013.**

ECP designed and engineered, provided proprietary equipment with electrical hardware and programmed the PLC for the April 30, 2013 pilot plant start up. ECP's personnel and operator training staff performed operations of the first run of torrefied wood chips for a European licensee.

# Earth Care Products, Inc.

800 North 21<sup>st</sup> Street  
Independence, KS 67301  
Phone 620-331-0090 Fax 620-331-0095  
E-mail: [ecpi@ecpisystems.com](mailto:ecpi@ecpisystems.com)  
Website: [www.ecpisystems.com](http://www.ecpisystems.com)

## ACTOF® PILOT PLANT ONE TON PER HOUR



BULK TRUCK  
LOAD OUT



CYCLOCLEAN SOLID BIOMASS BURNER FOR HEATING Z8 BIO-  
MASS DRYER & TORREFACTION REACTOR



PLANT OPERATOR'S CONTROL ROOM



INTELLICENTER MCC

## Earth Care Products, Inc.

800 North 21<sup>st</sup> Street  
Independence, KS 67301  
Phone 620-331-0090 Fax 620-331-0095  
E-mail: [ecpi@ecpisystems.com](mailto:ecpi@ecpisystems.com)  
Website: [www.ecpisystems.com](http://www.ecpisystems.com)



TORREFACTION REACTOR'S VOC & TORREFIED MATERIALS SEPARATOR



BLACK HEAT FURNACE DELIVERING HEAT INTO TORREFACTION REACTOR



DISCHARGING INTO TORREFIED MATERIALS COOLER

# Earth Care Products, Inc.

800 North 21<sup>st</sup> Street  
Independence, KS 67301  
Phone 620-331-0090 Fax 620-331-0095  
E-mail: [ecpi@ecpisystems.com](mailto:ecpi@ecpisystems.com)  
Website: [www.ecpisystems.com](http://www.ecpisystems.com)



DRIED, SIZED BIOMASS FEED BIN TO TORREFYING REACTOR



OPEN-TOP, LIVE-BOTTOM HOLDING HOPPER  
INFEDING RAW BIOMASS INTO PROCESS



Z8 ROTARY DRYER (RIGHT)



TORREFIED MATERIAL HANDLING &  
METERING BIN FEEDING PELLETTING  
MACHINE