



E3 Assessment at CCP Chatham

VA Environmental Excellence Conference, Richmond, March 13, 2014



CCP Composites

- ▶ Wholly owned subsidiary of the Total Group
- ▶ Operates worldwide to produce unsaturated polyester resins, vinyl esters, and gelcoats
- ▶ We serve manufacturers who produce items for:



Marine
Markets...



Transportation
Markets...

CCP Composites



► Residential and Industrial Construction...



► And Emerging Technologies



CCP Chatham



- 34,000 sq. ft. facility operating on 10 acres of a 95 acre plot
- 24 employees
- 24/7 production schedule
- Major equipment – two reactors and a thermal oxidizer

E3 Assessment Process



- ▶ **One day performed by representatives of Genedge Alliance:**
 - Energy – Frank Watson
 - Environmental – Keith Litz
 - Economy – Tom Zbell

- ▶ **Opening Meeting and Guided Tour (about 1.5 hours total)**

- ▶ **Remainder of day assessment team worked by themselves**
 - Interviews
 - Compliance Audit
 - Install data loggers and inspect equipment with thermal imaging camera

E3 Report – Noteworthy Energy Practices



Best Practices:

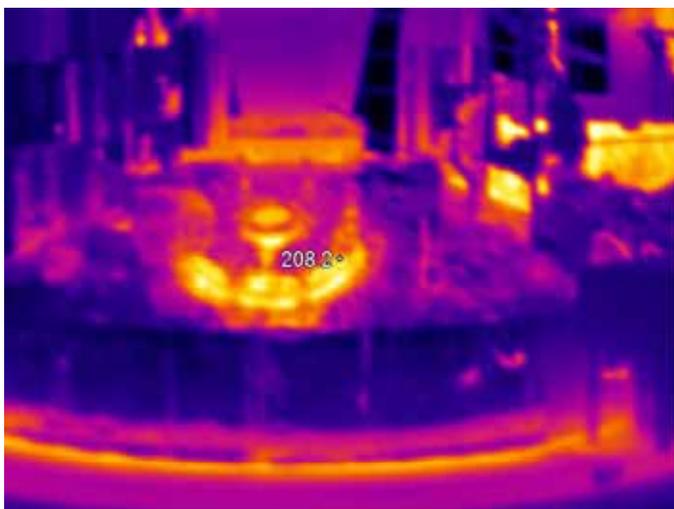
- Energy Tracking Tools in use
- Some lighting replacement (to T8 fixtures)
- Light timers in production area to reduce usage in day time
- Use of VFDs (Variable Frequency Drives)
- Replacement of heating system on old reactor (reduced natural gas usage by 23%)



E3 Report – Noted Energy Opportunities

► Opportunities for Improvement:

- Vending Machine Lighting
- Leak ID and repair program (Air, Steam, Nitrogen)
- Lower compressed air system pressure
- Tune burners (hot oil boiler, thermal oxidizer, steam boiler)
- Steam trap PM program
- Thermal imaging PM program



E3 Report – Noteworthy Environmental Practices



Best Practices:

- ISO14001 certified and VEEP E4
- 90-day cage and satellite accumulation areas in good shape
- RCRA, DOT, Hazardous Waste training scheduled annually for all employees
- Proper permits in place and suitable
- Waste oil and universal waste areas managed appropriately



E3 Report – Noted Environmental Opportunities



► Opportunities for Improvement:

- Big bag recycling
 - Approximately half of our non-hazardous waste
 - Information on material and supplier forwarded to Genedge
 - Work proceeding with recycler on CCP's behalf

- Reaction water treatment
 - Approximately 2MM gallons of water by-product produced and shipped offsite to a deep well facility annually
 - Very offensive odor, flashpoint
 - Permitted to send water to POTW if smell can be abated
 - Project to treat water odor in process – Genedge able to offer an alternate technology for testing
 - Would reduce hazardous waste volume by ~80% and save over \$250K annually



E3 Report – Noteworthy Economy Practices



Best Practices:

- Graded using a Lean Assessment
- Score of 54.3 of 90 one of highest Genedge has seen

#	Scores from assessment worksheets	Abbr.	Score from sheet	X10	Score	Target Score
1	Communication & Cultural Awareness	CCA	0.72	10	7.2	10
2	Visual Systems & Workplace Organization	VS&WO	0.73	10	7.3	10
3	Standardized Work	SW	0.73	10	7.3	10
4	Continuous Improvement	CI	0.28	10	2.8	10
5	Operational Flexibility	OF	0.80	10	8.0	10
6	Mistake Proofing / Poka Yoke	MP	0.41	10	4.1	10
7	TPM, Total Productive Maintenance	TPM	0.71	10	7.1	10
8	Balanced Production	BP	0.40	10	4.0	10
9	Changeover Reduction	CO	0.64	10	6.4	10
	Total score				54.3	90
					60.3	100



E3 Report – Noted Economy Opportunities



► Opportunities for Improvement

- Continuous Improvement
 - No formal program (Lean, Six Sigma, etc.)
 - No CI coordinator

- Mistake Proofing
 - No formal program or training

- Balanced Production
 - No daily or shift production goals
 - No formal program



Assessment Overview

- ▶ **Energy – Energy tools in use, projects implemented, minor improvements needed**
- ▶ **Environmental – No compliance issues, recycling opportunities noted**
- ▶ **Economy – Strong control of process, Continuous Improvement programs desired**

- ▶ **Overall – one of the strongest organizations Genedge has seen!**

Strength of Management Systems

- ▶ **CCP Chatham history consists of many environmental compliance issues (prior to 2000)**
- ▶ **Public pressure could have caused closure – management team made decision to improve management systems**
- ▶ **Since then CCP has implemented ISO 9001 (Quality), ISO 14001 (Environmental), Advanced Integrated Management System (which combines OSHA PSM, ISO, EPA, and Responsible Care requirements), Superior Energy Performance, and ISO 50001**
- ▶ **Top-to-Bottom buy in of management systems is key**

Summary

- ▶ **The Genedge E3 Assessment is a valuable tool. Some locations may be able to take advantage of government grants to lower or defer cost of assessment.**
- ▶ **Strong management systems can overcome poor work practices. Implementation takes work but the alternatives are not acceptable!**
- ▶ **Questions?**