5th Annual CARE Conference
Sustainability – The Role of the Manufacturing Industry
Disclaimer

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Today’s Recycling Methods

A. Primary Recycling
B. Secondary Recycling
C. Tertiary Recycling
D. Quaternary Recycling
Moving Forward

• The economics vs. the environment
• Energy savings
• Choosing the right recycling system
Recycling Challenges

- Spending nature’s capital
- Human “footprint”
- The virgin/recycle competition
- Recycling rates are dropping
## Energy Savings and CO2 Impact

<table>
<thead>
<tr>
<th>Materials</th>
<th>Grade</th>
<th>% Energy Reduction*</th>
<th>MM BTUs</th>
<th>Equivalent in Barrels of Oil</th>
<th>Tons CO2 Reduced</th>
<th>MM BTUs</th>
<th>bal of Oil EQV</th>
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<tbody>
<tr>
<td>Aluminum</td>
<td>95</td>
<td>196</td>
<td>37.2</td>
<td>13.8</td>
<td>-1.06</td>
<td>-0.2</td>
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<td>Paper**</td>
<td>Newsprint</td>
<td>45</td>
<td>20.9</td>
<td>3.97</td>
<td>-0.03</td>
<td>11.8</td>
<td>2.24</td>
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<td></td>
<td>Writing</td>
<td>35</td>
<td>20.8</td>
<td>3.95</td>
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<td>Linerboard</td>
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<td>12.3</td>
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<td>0.07</td>
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<tr>
<td></td>
<td>Boxboard</td>
<td>26</td>
<td>12.8</td>
<td>2.43</td>
<td>0.04</td>
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<td>Glass</td>
<td>Recycle</td>
<td>31</td>
<td>4.74</td>
<td>0.9</td>
<td>0.39</td>
<td>-0.34</td>
<td>-0.06</td>
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<td></td>
<td>Reuse</td>
<td>328</td>
<td>50.18</td>
<td>9.54</td>
<td>3.46</td>
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<td>2.71</td>
<td>1.52</td>
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<td>Plastic</td>
<td>PET</td>
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<td>11</td>
<td>0.985</td>
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<td></td>
<td>PE</td>
<td>75</td>
<td>56.7</td>
<td>10.8</td>
<td>0.346</td>
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<td>PP</td>
<td>74</td>
<td>53.6</td>
<td>10.2</td>
<td>1.32</td>
<td>38.5</td>
<td>7.3</td>
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<tr>
<td>Carpet</td>
<td>All Types</td>
<td>22~45</td>
<td>44.4</td>
<td>7.7</td>
<td>13.9</td>
<td>20</td>
<td>3.4</td>
</tr>
</tbody>
</table>

*Relative to energy required for virgin production

** Energy calculations for paper recycling count unused wood as fuel

Sources:
- Argonne National Labs DOE
- Franklin Associates Phillips 66
- Wellman
A Carbon Awareness Timeline

- 1827, Jean-Baptiste Fourrier recognizes the “greenhouse effect”
- 1896, Svante Arrhenius quantifies how much Earth is warming due to CO2 emissions
- 1985, British and American scientists discover a “hole” in the Ozone Layer
- 1988, Claudine Schneider (R-R1) introduces the Global Warming Prevention Act in congress
- 1990, IPCC (Intergovernmental Panel on Climate Change) reports that Earth has warmed 0.5 Deg C in the past century
- 1997, Kyoto Protocol, B. Clinton signs the treaty it but does not submit it to the Senate
- 2007, IPCC reports that global warming is man-made
“Recycling offers a host of environmental, economic, and societal benefits (see Question “Is Recycling Worthwhile?”). While landfill space is plentiful on the national level, some areas of the United States, particularly the heavily populated East Coast, have less landfill capacity and higher landfill costs.”

Quoted from http://www.epa.gov/msw/faq.htm
Infiltrator Systems Inc.

• The world’s leading manufacturer of plastic leachfield drainage chambers for environmental onsite wastewater solutions.

• The only chamber company that sources recycle material, manufactures its own products and sells to its customers through its national distribution system.

• Two Injection molding plants. Winchester KY and Ogden UT.
Leach Field System Components
Champion Polymer Recycling
A Division of Infiltrator Systems Inc

- Complete recycling network in place for efficient material processing
- Fifth largest user of recycled material in the United States
- Unparalleled service and creative solutions to recyclers and waste generators
- Partnering with Champion provides you with an environmentally sound recycling solution
Material Sourcing – Market Segments

Major Categories:
- Consumer Packaging & Products
- Industrial Packaging
- Construction
- Hygiene and Cosmetics
- Medical
- Automotive
- Textile – specifically CARPET
Champion Polymer Recycling

- Began procuring PP carpet in 2002 for recycling
- Significant capital investments in processing equipment
- Significant human resource investments. Tremendous effort in process and program development
- Champion and Infiltrator systems are committed to exceed the amount of carpet recycled in 2007 by more than 70% over 2006
- Built mutual beneficial relationships with key suppliers of carpet across the country
Champion Polymer Recycling

Future Outlook - Sustainability

• Polypropylene carpet will continue to be a key material
• Continue to look for additional partners in our carpet collection efforts
• Looking to expand usage into other carpet types
• Champion appreciates the support of CARE and of our suppliers and looks forward to continue to be a key player in the carpet recycling effort