

Travel Gear Company

Waste Reduction Recommendation Report

*Prepared by Solana Recyclers, Inc.
Sponsored by Region IX of the US EPA*

June 13, 1999

Summary

The facility manufactures recreational and travel products which are shipped throughout the country and the world. Some of these products include: backpacks, travel cases, brief cases, duffle bags, and fanny packs. The facility assessed houses approximately 150 employees and occupies nearly 66,000 square feet. Currently, the facility is recycling cardboard, mixed paper, shrink wrap, aluminum, wood pallets, and plastic.

On May 11, a waste assessment was performed at the facility. Administration, shipping, receiving, the cafeteria, the recycling yard, and manufacturing areas were surveyed.

Background Information

Address	1740 La Costa Meadows Dr. San Marcos, CA 92069
Phone	760/ 471-7600
Contact	Gary Pezzoli, Facilities and Maintenance

Waste Characterization

Due to the fact the waste at the main facility was comprised almost entirely of manufacturing scraps (laminated tafetta, cordura fabric, polyethylene foam) a volume-based waste characterization was not performed. A comprehensive facility walk-through was performed and the following departments were toured: shipping, receiving, administration, recycling yard, food service, and employee restrooms.

Waste Reduction Recommendations

I Reusable Pallet System

Utilize a reusable pallet system for shipping products to and from manufacturing sites in Mexico and San Marcos. Pallets are being recycled. However, this represents an ongoing purchasing cost and ultimately results in natural resource consumption as more trees are cut to provide the raw materials for the wooden pallets. Listed below is a cost analysis for a reusable pallet shipping system between the US and Mexico:

Number of Units	Unit Cost	Annual Cost
<u>Wooden Pallets</u>		
1800 (48x40) pallets per year	\$4.85	\$8,730.00
<u>Reusable Plastic Pallets</u>		
300 (48x40) 1000 lb. capacity	\$24.88	\$7,464.00
1st Year Cost Savings		\$1,266.00
Subsequent Year Cost Savings		\$7,730.00
(total savings minus \$1000/yr replacement costs)		

Price Quote Received From:

Angel/Cotton Associates, Inc. (Trienda) John Cotton	562/989-2403
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II Reusable Shipping Container System

The facility procures many shipping containers for use to ship product between San Marcos and Mexico (4000 23x16x19 boxes/month). Cardboard boxes are being recycled. However, this represents a significant purchasing cost as well as an increased demand for materials derived from natural resources. Corrugated plastic serves to replace cardboard and has a life of five to seven years. When used correctly, boxes can be erected within 15-20 seconds. Listed below is a cost analysis for a reusable shipping system:

Number of Units	Unit Cost	Annual Cost
<u>Corrugated Boxes</u>		
48,000 (23x16x19) boxes/year	\$1.05	\$50,400.00
<u>Reusable Boxes</u>		
6000 (23x16x19) reusable boxes	\$7.96	\$47,760.00
1st Year Cost Savings		\$2,640.00
Subsequent Year Cost Savings		\$42,400.00
(Total Cost Savings Minus Replacing 1000 units/year- \$8,000/yr)		

**Note: Given that the avg. life of the boxes is 6 years and the quantity is 6000 boxes, an average of 1000 boxes/year can serve as the replacement cost value.

III Eliminate the Use of All PolyBags Which are Used for Shipping Products

After doing a walk-through of the shipping department, it was evident that some products are shipped with a poly bag outer lining while others are not. All products have codes placed on their individual tags as well as on the boxes in which they are shipped. Due to the fact that products are durable and can easily be warehoused in boxes, it is suggested that polybags no longer be used in the shipping process. Oftentimes buyers will appreciate this effort to reduce waste and simplify receiving on their end. The following is a cost analysis of the potential savings:

Number of Units	Unit Cost	Annual Savings
40,800 Poly Bags 1.5 MIL 13"x 24"	\$0.04	\$1,550.00
7,200 Poly Bags 1.5 MIL 6" x 20"	\$0.01	\$90.00
69,600 Poly Bags 1.5 MIL 10" x 18"	\$0.02	\$1,426.00
105,600 Poly Bags 1.5 MIL 12" x 20"	\$0.03	\$3,062.40
120,000 Poly Bags 1.5 MIL 16" x 24"	\$0.03	\$3,000.00
96,000 Poly Bags 1.5 MIL 20" x 30"	\$0.04	\$4,080.00
14,400 Poly Bags Zip 6" x 9"	\$0.03	\$473.76.
63,600 Poly Bags Gussetted 23x10x39	\$0.08	\$4,825.97
12,000 Poly Bags, Gussetted 23x17x46	\$0.09	\$1,128.00
Annual Cost Savings		\$19,637.33

IV Install Warm Air Driers in Employee Restrooms

Approximately \$1,400.00 is spent annually on roll towels for drying hands in the employee restrooms. These towels represent an ongoing cost and waste disposal issue. It is suggested that warm air hand driers be placed in each of the four employee restrooms. Listed below is a cost analysis.

Procurement Costs for Paper Towels	\$1,400.00/yr
Costs for Installing Air Driers	
Materials Costs (4 Driers @ \$280 each)	\$1,120.00
Installation Costs (labor and electrical wiring)	\$480.00
Increased Utility Costs (1,920 kw hours annually -estimated)	\$230.40
Rubber Mats 3 x 6 ft. (to reduce water on floors)	\$280.00
Maintenance Costs	\$250.00/yr
Total Initial Expenditure	\$2,360.40
Investment Recovery Time	1.7 years
Subsequent Annual Cost Savings	\$920.00/yr

Price quotes were obtained from:		
Warm Air Driers	WAXIE Janitor Supply	619/292-8111
Installation	More Power Electric	619/566-1363
Utilities	SDG&E	800/411-7343
Rubber Mats	RB Rubber Products, Inc.	800/525-5530

V Recycle Cardboard at the Receiving Facility

The waste at the receiving facility consists of at least 50% unflattened and flattened corrugated cardboard. This material is recyclable. A cardboard recycling program to recover this material will pay for itself through reductions in trash service fees.

Current Waste Management Costs		
One 3 cu. yd. trash bin serviced 2x/week	\$136.90/month	\$1,642.80/yr
Recommended Waste Management/ Recycling Costs		
One 3 cu. yd. trash bin serviced 1x/week	\$73.15/month	\$877.80/yr
3 cu. yd. recycling bin serviced 1x/week	\$45.00	\$540.00
(For cardboard and mixed paper)		
Annual Cost Savings		\$225.00

Price Quote Obatined From:	Margot Cobian, EDCO	760/ 436-4151
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Advertise Fabric Cuttings For Reuse or Recycling In CALMAX

Of the existing four 3 cubic yard bins for waste, three of the containers are filled almost entirely with scrap cuttings consisting of laminated taffeta, cordura, and HDPE foam. These materials can possibly serve as a feedstock (insulating material) for toys, mattresses, etc. Advertise these scrap textiles in the CALMAX materials exchange publication. To advertise **free of charge**, call (916) 255-2369. Listed below is a sample cost analysis for removing these materials from the waste stream.

Existing Waste Management Costs

Four 3 cubic yd. bins serviced 3x/week	\$802.56/month	\$9,630.72 annually
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Recommended Waste Management Costs (If steady end users located)

Two 3 cubic yd. bins serviced 3x/week	\$401.28/month	\$4,815.36 annually
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Stockpiling and Shipping Costs (ea)		\$2,000.00 annually
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Potential Cost Savings		\$2,414.08 annually
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Miscellaneous Waste Reduction Recommendations

- Analyze Dye Cut Matrix to ensure maximum usage of textiles
- Recycle all Fabric Roll Cores. EDCO will accept groundwood products such as the role cores in their mixed paper bin.
- Purchase reusable coffee mugs for all employees.
- Post signage and encourage double-sided copying
- Recycle used toner cartridges (TCR Services 619/ 279-0322)
- Reuse one sided paper for message pads

Purchase Recycled Paper Through the Recycled Products Purchasing Cooperative

Oftentimes recycled paper costs more than virgin fiber paper. The Recycled Products Purchasing Cooperative (RPPC) is able to provide 30% postconsumer recycled paper for prices that are cheaper than your current virgin fiber costs. Listed below is the cost savings potential:

Virgin Fiber Paper Costs	720 cases/year	\$25.00/cs	\$18,000 annually
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Recycled Paper Costs	720 cases/year	\$23.65/cs	\$17,028 annually
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Cost Savings			\$972.00 annually
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Contact: Tyson Miller @ Solana Recyclers (760) 436-7986

Summary of Waste Reduction Recommendations

Description	Year One Savings	Successive Yr. Savings	Diversion
Reusable Pallets	\$1,266.00	\$7,730.00	45 Tons
Reusable Shipping	\$2,640.00	\$42,400.00	36 Tons
Eliminate Poly Bags	\$19,637.33	\$19,637.33	.5 Tons
Recycle OCC @ shipping	\$225.00	\$225.00	2.4 tons
Donate Fabric Scraps	\$2,414.08	\$2,414.08	62.4 tons
Buy Recycled Paper	\$972.00	\$972.00	
Totals	\$27,154.41	\$73,378.41	146.30 Tons

Please feel free to call Tyson Miller at Solana Recyclers with any questions concerning this report at 760/ 436-7986. Solana Recyclers, Inc. was able to perform this waste assessment service for the facility under the Sustainable Futures Project. This project is funded by region IX of the US EPA. The statements and conclusions of this report are those of the contractor and not necessarily those of the US EPA, its employees, or the federal government. The contractors make no warranty, express or implied, and assume no liability for the information contained in the preceding text. Reports are available for review by the US EPA grant manager. Otherwise, all information obtained in this assessment is confidential unless granted permission for public issuance.

Attachments

Tharco Quote
Angel/Cotton Quote
CALMAX Publication