Baled Waste for Los Angeles County

An Alternative to Containers

Presentation to LA County Integrated Waste Management Task Force

August 20th, 2009

TransLoad America

- Operates in 10 states with highly experienced management team
- Specializes in “Waste-by-Rail”
- Manufacturers and operates proprietary waste baling systems

Today's Goal

- Demonstrate to the Task Force that its in LA's best interest to develop a waste baling and wrapping system as an alternative to steel containers

Benefits of Baling

- Eliminates all of the nuisances associated with garbage

- Clean
- Odorless
- Stored Indefinitely
- Transportable
- Preserves energy conversion option

Bale Tech System

- High Compaction: 1,400-1,700 lbs/yd^3
- High Throughput: 100+ tons/hour
- Hermetically Seals Waste
- Simple, Rugged Design
- Portable and Safe
- Easy to Operate and Maintain

Bale Tech Bales

- Dense, stable and durable
- Air and water tight
- Odorless
- No decomposition
- Easily transportable
- Store indefinitely

Bales vs. Containers

Would require little change to the current operating plan…

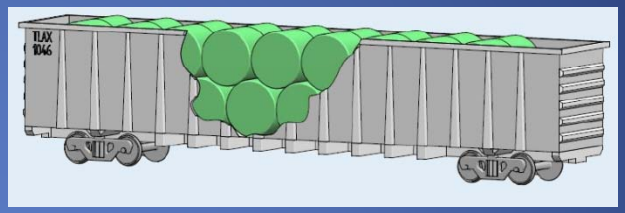
	Container System	Bale System
1	Waste arrives at transfer station by truck	
2	Recyclables removed	
3	Waste loose loaded into containers	Waste baled and wrapped
4	Waste transported to intermodal yard	
5	Container lifted onto flats	Bales loaded into railcars
6	Transported by rail to landfill	
7	Containers / Bales unloaded and trucked to working face	

Huge Potential Capital Cost Savings

- No containers
- No tippers
- No container lifts

Increased Efficiencies

- 80 tons per car / 4,000 tons per train
- 93 ft. per car / 4,650 ft. trains



- 105 tons per car / 5,040 tons per train
- 69 ft. car/ 3,450 ft. trains

- Baling system would need 25% less railcars
- Train lengths reduced by ¼ mile per train

Advantages at the Landfill

- No tipper - reduces handling
- Bales are already compacted – operating savings at landfill whether stored as bales or broken open
- Odorless
- No vermin attracted e.g. birds, rats, etc.
- Stored bales are a source of fuel

Summary Capital Expenditures

- Based on 10,000 tons per day

	TLA – Bale Tech	Containers
Balers & Shredders	$31,200,000	--
Containers	--	78,750,000
Railcars	49,875,000	62,343,750
Total	**$81,075,000**	**$141,093,750**

Next Steps

- Meet with LACSD to present baling alternative
- Provide LACSD with detailed specifications and costs of baling system
- Offer to assist LACSD to develop capital and operating expense comparisons

Appendix

Baling System
Capital and Operating Expenditures

- Based on 10,000 tons per day:

Operating Expenses	
Materials Recycling Facilities	
Film Cost	$484,084
Net Cost	437,237
Baler Maintenance	117,117
Shredder Maintenance	156,156
Baler Energy Cost	31,231
Shredder Energy Cost	104,625
Intermodal Site	
Gondola Lease Expense	332,500
Mesquite Landfill	
Other	
Labor Cost	219,430
Total Monthly Operating Expenses	$1,882,380

Capital Expenditures[1]	
Materials Recycling Facilities	
John 744 (10)	$5,000,000
Hammel Shredder (12)	9,600,000
Bale Tech 3 (12)	21,600,000
Forklift (10)	500,000
Intermodal Site	
835R Raised Rail (6)	4,800,000
Mesquite Landfill	
835R Raised Rail (6)	4,800,000
HM350 Komatsu (15)	6,030,000
Other	
Total Capital Expenses	$52,330,000

(1) Labor costs are to load the shredder, operate the baler, load / unload the rail cars, and deliver bales to the working face.

(2) Operating costs exclude equipment amortization listed under capital expenditures above, and transportation to the Intermodal Facility.

(3) Assumes one shift per day.

Case Study

BALING

Gondola Cars Using Baling for MSW	
Tons / Day	10,000
Days / Year	280
Payload / Gondola (Short Tons)	105
Number of Railcars	665
Costs of Gondolas	49,875,000
Useful Life (Years)	60
CAPEX / Years of Average Life	831,250
Maintenance / Year	665,000
Containers / Flatbed	N/A
Total Payload / Car (Short Tons)	105
Cost of Baler & Shredder	31,200,000
Useful Life (Years)	7
CAPEX / Years	4,457,143
Maintenance / Year	2,408,000
Cost of Consumables	9,912,000
Total Maintenance / Ton	**$1.10**
Total Consumables / Ton	**$3.54**
Total CAPEX / Ton	**$1.89**
Gondola Model Cost / Ton	**$6.53**

CONTAINERS

Flatbed Railcars with Containers	
Tons / Day	10,000
Days / Year	280
Payload / Flatbed Car (Short Tons)	80
Number of Railcars	831
Cost of Flatbeds	62,343,750
Useful life (Years)	60
CAPEX / Years of Average Life	1,039,063
Maintenance / Year	831,250
Containers / Flatbed	4
Total Payload / Car (Short Tons)	80
Cost of Containers	74,812,500
Useful life (Years)	10
CAPEX / Years of Average Life	7,481,250
Maintenance / Year	13,125,000
Cost of Consumables	ND[2]
Total Maintenance / Ton	**$4.98**
Total Consumables / Ton	**N/A**
Total CAPEX / Ton / Year	**$3.04**
Flatbed Comparison Cost / Ton	**$8.03**

Note 1: *Does not include equipment required for loading and unloading, labor costs, or transportation costs per ton; however, flatbeds with containers require more cars and incur a higher cost per car due to a surcharge on 89 foot flatbed railcars.*

Note 2: *Cost of consumables for containers do not include costs incurred due to consumption of water, detergents, and all related costs and expenses required to deal with leachates from container washing and decontamination.*