

# **Non-routine Wastes – Construction Projects**

## **Plant Expansions at Grifols, Clayton, NC**

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**GRIFOLS**

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# GRIFOLS

- Pharmaceutical Manufacturing in Clayton, NC
- ~1600 employees, ~250 acres
- Manufactures products from human plasma
- Participant in NCDENR's Environmental Stewardship Initiative (Rising Steward level)
- ISO 14001 Equivalent Program

## What is plasma?



White  
blood cells  
and platelets



... is the **liquid part of blood** which contains a **mixture** of water, mineral salts, proteins and nutrients.

GRIFOLS

# 3 Significant Expansions in 2013-2015

Plasma Logistics Center  
New Warehouse  
Multi-Purpose Facility



# Plasma Logistics Center

Fully automated high-rise -30°C freezer and 2-story processing facility for plasma receipt, shipping, and classification.

83,560 square feet

5,100 pallet spaces

Capacity to store 3 million liters of human plasma



# New Raw Material Warehouse

for additional space to consolidate offsite storage facilities and support the continued growth of the Clayton site.

64,000 square feet

3,900 pallet spaces

First LEED Certified building in  
Johnston County, North Carolina



# Multi-Purpose Facility

For processing and purifying immune globulins from survivors of rare diseases.

8,000 square feet

Unique construction building within a building

Enclosed and isolated from the rest of the site



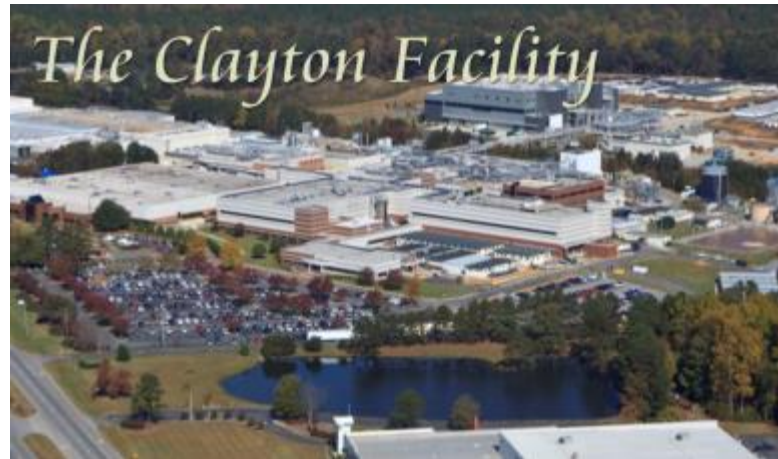
# Critical Steps in Construction Waste Management



Enforce (if necessary)

# Training of Contractors

- Required for all contractors every six months
- Especially important to have engineers and construction managers on-board
- Monitoring and feedback



# Segregation of Construction Waste

Metal

Wood

Cardboard

Concrete

Asphalt

Trash





Project: GRIFOLS  
Est. End Date: 2/1/2016

Address: 8368 US 1  
CLAYTON

Project MSA/CMA: Raleigh-Ci

WM Account Manager: Jon Alston

Project Size:

Floor Count: 1

Building Type: COMM

Non-Manu

LEED® Certification Type: Silver

Target Diversion: 50.0%

Actual Diversion: 82.3%

**Material Totals:**

Material	Target %	Actual %
Cardboard	NaN%	100.0%
Concrete	NaN%	100.0%
Wood	NaN%	100.0%
Residual	NaN%	0.0%
<b>Total</b>		<b>82.3%</b>

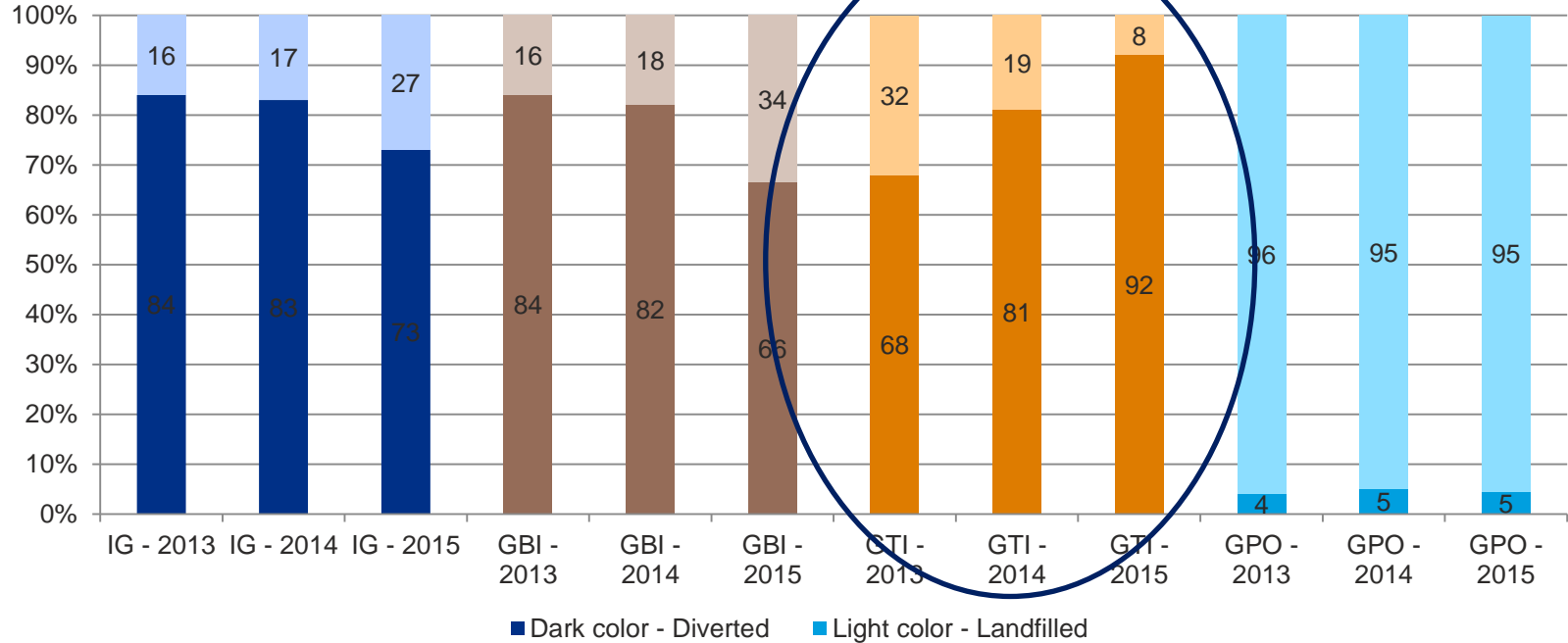
**Ticket Details:**

Ticket Date From: (All)

Ticket Date To: (All)

Ticket Month	Ticket Date	Ticket	Destination Facility	Hauler	Material	UOM	Diverted		Residual
							Total Qty	Act %	
JULY 2014	7/11/2014	22134	ROWLAND LANDFILL		Concrete	Tons	11.15	100.0%	0
JULY 2014	7/14/2014	23334	ROWLAND LANDFILL		Concrete	Tons	11.69	100.0%	0
JULY 2014	7/14/2014	22520	ROWLAND LANDFILL		Concrete	Tons	12.15	100.0%	0
JULY 2014	7/14/2014	22521	ROWLAND LANDFILL		Concrete	Tons	11.54	100.0%	0
JULY 2014	7/14/2014	23333	ROWLAND LANDFILL		Concrete	Tons	11.54	100.0%	0
JULY 2014	7/14/2014	23321	ROWLAND LANDFILL		Concrete	Tons	15.36	100.0%	0
JULY 2014	7/14/2014	22136	ROWLAND LANDFILL		Concrete	Tons	12.11	100.0%	0
JULY 2014	7/21/2014	32838	ROWLAND LANDFILL		Concrete	Tons	12.28	100.0%	0
JULY 2014	7/22/2014	32737	ROWLAND LANDFILL		Concrete	Tons	9.28	100.0%	0
JULY 2014	7/22/2014	32753	ROWLAND LANDFILL		Concrete	Tons	6.67	100.0%	0

## Waste Diverted from Landfill



# Cafeteria Waste Composting



- Food prep waste only – no post consumer
  - Monday through Friday
  - Average 92 pounds per day
  - Sent to anaerobic digester
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- Also save all food cans for metal recycling



## Next Steps

- Converting to compostable dinnerware
- Collecting post consumer waste

# Contact Information

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