

TE Connectivity

We are one of the leading providers of advanced automobile connectivity solutions. The automotive industry uses our products in automotive technologies for body and chassis systems, convenience applications, driver information, infotainment solutions, miniaturization solutions, motor and powertrain applications, and safety and security systems. TE is developing automotive solutions to help drive innovations for designs today and into tomorrow.

Christian Bauguss
Supervisor, Plating Chemistry Lab
Background – Reel-to-reel plating applications
TE Connectivity – 14 Years

EVERY CONNECTION COUNTS



TE Connectivity Pegg Road Hazardous Waste Goal

Sustainability goals are determined by the Corporate EHS team for each facility.

The Pegg Road Facility goal for FY23 - 17% reduction in our hazardous waste generation year over year

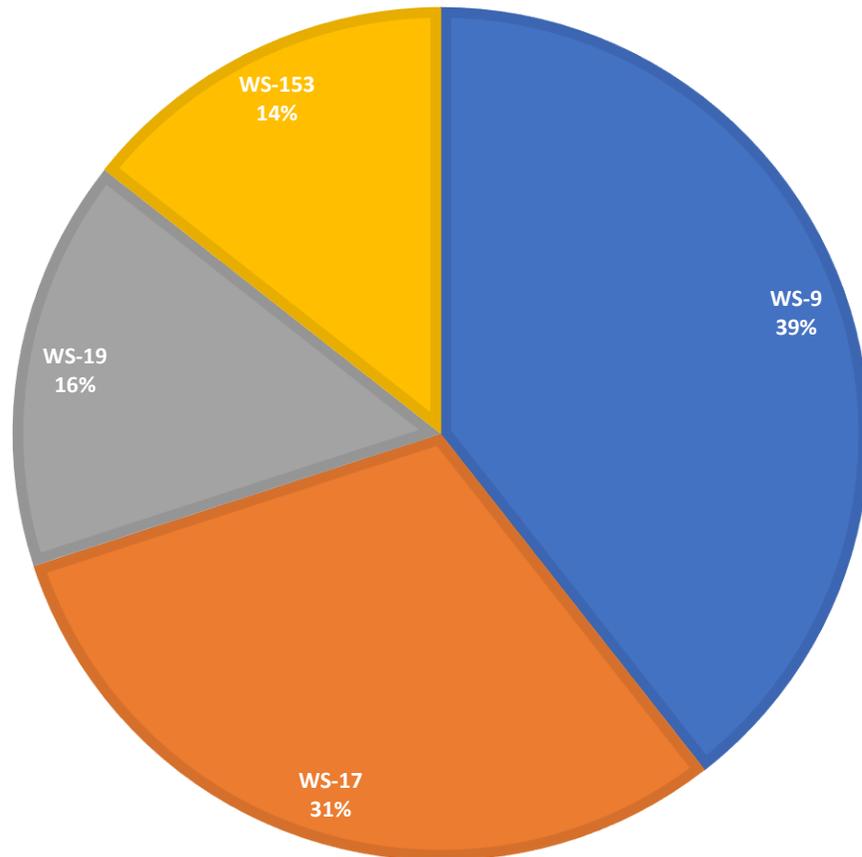
- **FY22 Hazardous Waste Total – 195,440 Pounds (88,650 kg)**
 - **FY23 Goal = 162,215 pounds or 73,579 kg (reduction of 33,226 pounds or 15,071 kg)**
- Total includes hazardous wastes disposed (not including hazardous waste that is recycled/goes for reclamation)
- Fiscal Year 2023 is from October 2022 – September 2023



Hazardous Waste Stream Focus

POUNDS SHIPPED IN FY22

■ WS-9 ■ WS-17 ■ WS-19 ■ WS-153



Top 4 Waste Streams and their sources (by Volume, FY22 data)

- WS-17 (Tin Bath Solution)
 - Tin Bath
 - Tin Rinse
- WS-9 (PTU Concentrate)
 - Evaporators
- WS-153 (Preposit Etch 748 Solution)
 - Acid Etch
- WS-19 (Resist Waste Solution)
 - Mask Strip
 - High Pressure Rinse



Hazardous Waste Reduction – Preposit Etch

Preposit Etch is a material that was used in the plating department to prevent flaking on plated materials. Preposit Etch (waste stream 153) is a characteristic hazardous waste (D002 – corrosive).

- ✓ After conducting numerous trials to verify the effectiveness of the change, the plating lab formally applied to replace the Preposit Etch material.
- ✓ Preposit Etch was replaced with sodium bisulfate, a non-hazardous material in order to reduce the volume and toxicity of hazardous materials used on site.

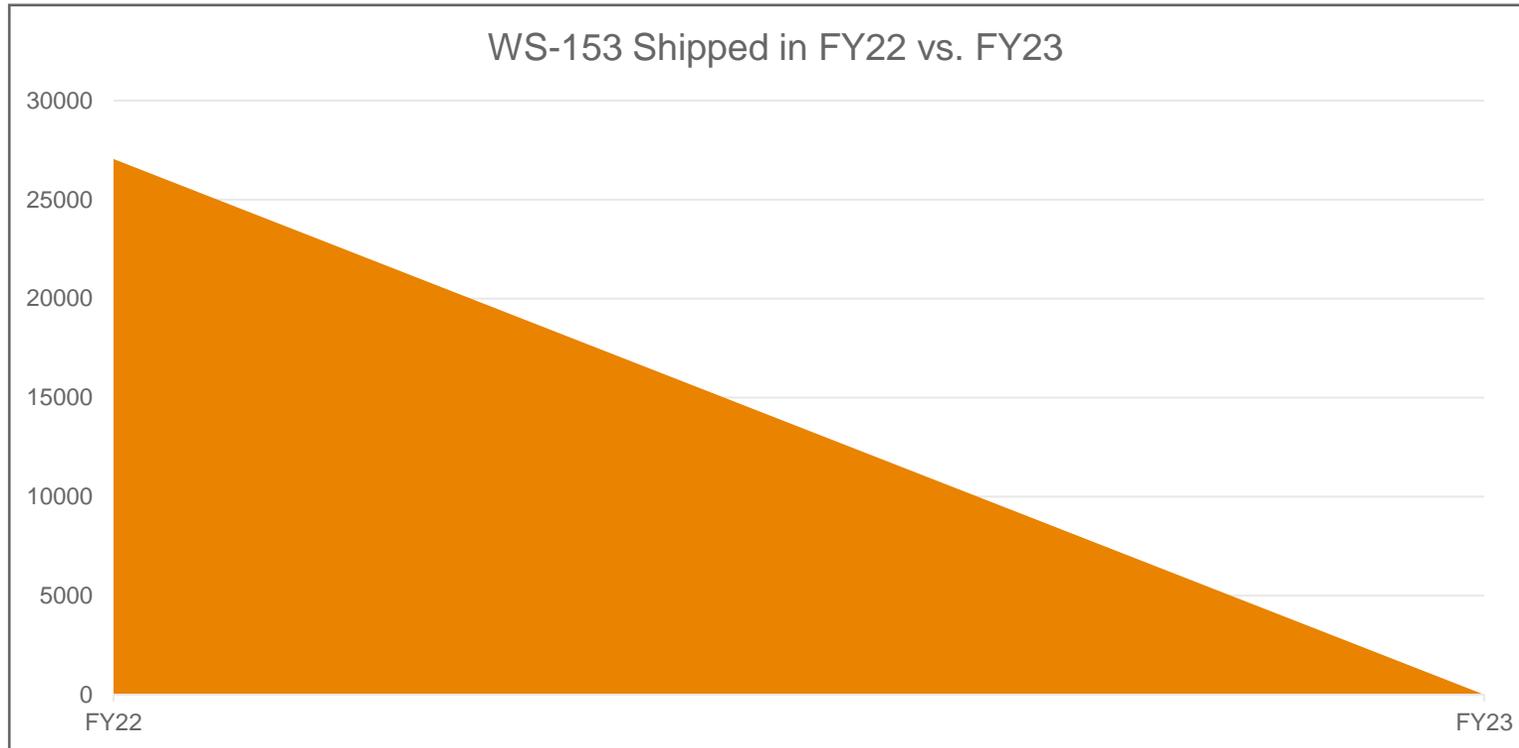
HAZARDOUS WASTE			
UN3264		<small>FEDERAL LAW PROHIBITS IMPROPER DISPOSAL. If found, contact the nearest Police or Public Safety authority or the U.S. Environmental Protection Agency.</small>	
RQ,UN3264,WASTE CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.,8,PGII,(WATER, PERPOSITE ETCH),(D002 @ 100#),ERG#154			
NAME: PREPOSIT ETCH LIQUID D002	WS: 30223-153	MTN:	LN:
HAZARD: CORROSIVE		LOC:	
		TRX:	
EPA ID: NC0000202523 (336)665-4472		PROF:	TSD:
TE CONNECTIVITY SVC ID 1655		PC:	
719 PEGG RD		CNTR:	
GREENSBORO, NC 27409			
CUST DEPT:	CUST CNTR:		
CUST ITEM:		START DATE:	



NON DOT-HAZARDOUS MATERIAL			
NON-DOT/NON-RCRA REGULATED			
NAME: 631 PLATING RINSEWATER (TYCO #11)			
	WS: 30223-13	DOC:	LN:
		LOC:	
		TRX:	
EPA ID: NC0000202523 (336)665-4472		PROF:	TSD:
TE CONNECTIVITY SVC ID 1655		PC:	
719 PEGG RD		CNTR:	
GREENSBORO, NC 27409			
CUST DEPT:	CUST CNTR:		
CUST ITEM:		START DATE:	



Hazardous Waste Reduction – Preposit Etch



In FY22, the site generated/disposed of 27,060 pounds of waste stream 153 (Preposit Etch Liquid waste). In FY23, the site generated/disposed of 0 pounds of waste stream 153.

✓ This has reduced the overall hazardous waste for the site by 13%, (27,060 lbs or \$52,372.82 per year)



GSO Hazardous Waste Tin Project

Greensboro, Pegg Rd
Christian Bauguss

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Tin Rinse Improvement

Problem:

- **Excessive Tin Waste** – Classified as hazardous - generated from evaporator failures

Solution:

- New 7-Stage rinses installed to reduce waste generated from the process
- Ensure water quality from daily analysis via ICP-OES

Results:

- Reduction of 22,114 pounds year over year
 - From **79,636 pounds in FY2021** to **57,522 pounds in FY2022**



Waste Stream 17 (Tin Bath/Rinse)

Profile Review and Segregation

Tin waste classified as hazardous due to the following constituents:

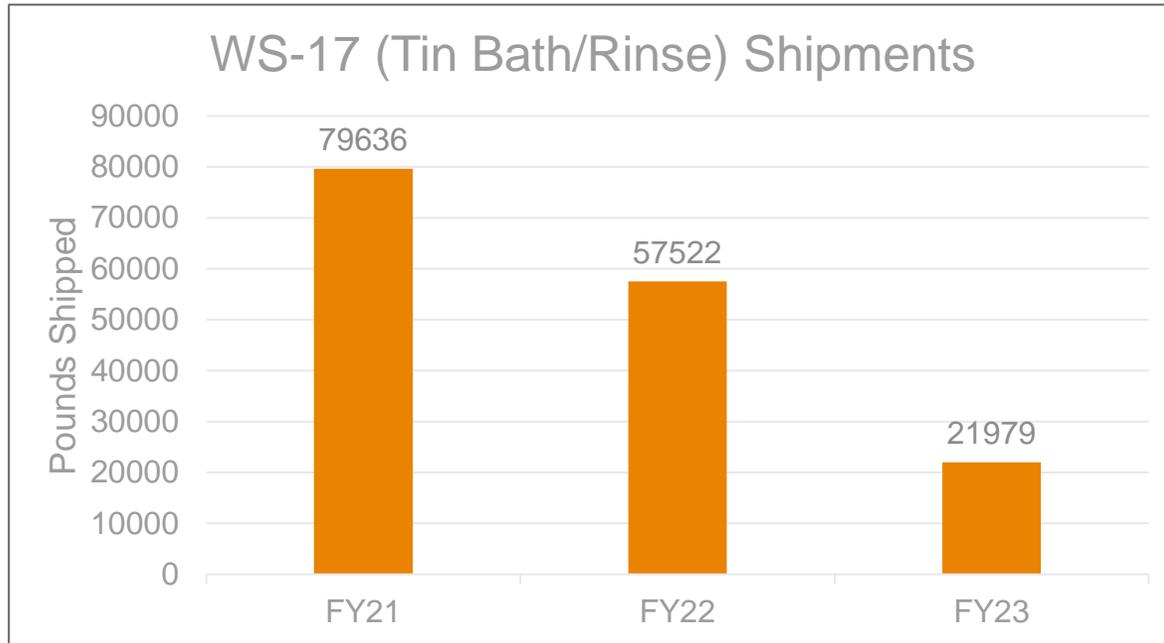
- **D002** – pH
- **D007** – Chromium – Regulatory limit of 5 mg/L
- **D008** – Lead – Regulatory limit of 5 mg/L

Plating implemented a process to reduce hazardous waste from all tin sources by:

- ✓ Using waste profile in determination labels after initial generation
- ✓ Perform elemental analysis via ICP-OES for all tin waste solutions
- ✓ Segregation and classification of waste as non-hazardous when below the regulatory limit for Chromium and Lead
- ✓ pH adjustment performed internally if the analysis is below regulatory limit



Waste Stream 17 (Tin Bath/Rinse) Volumes



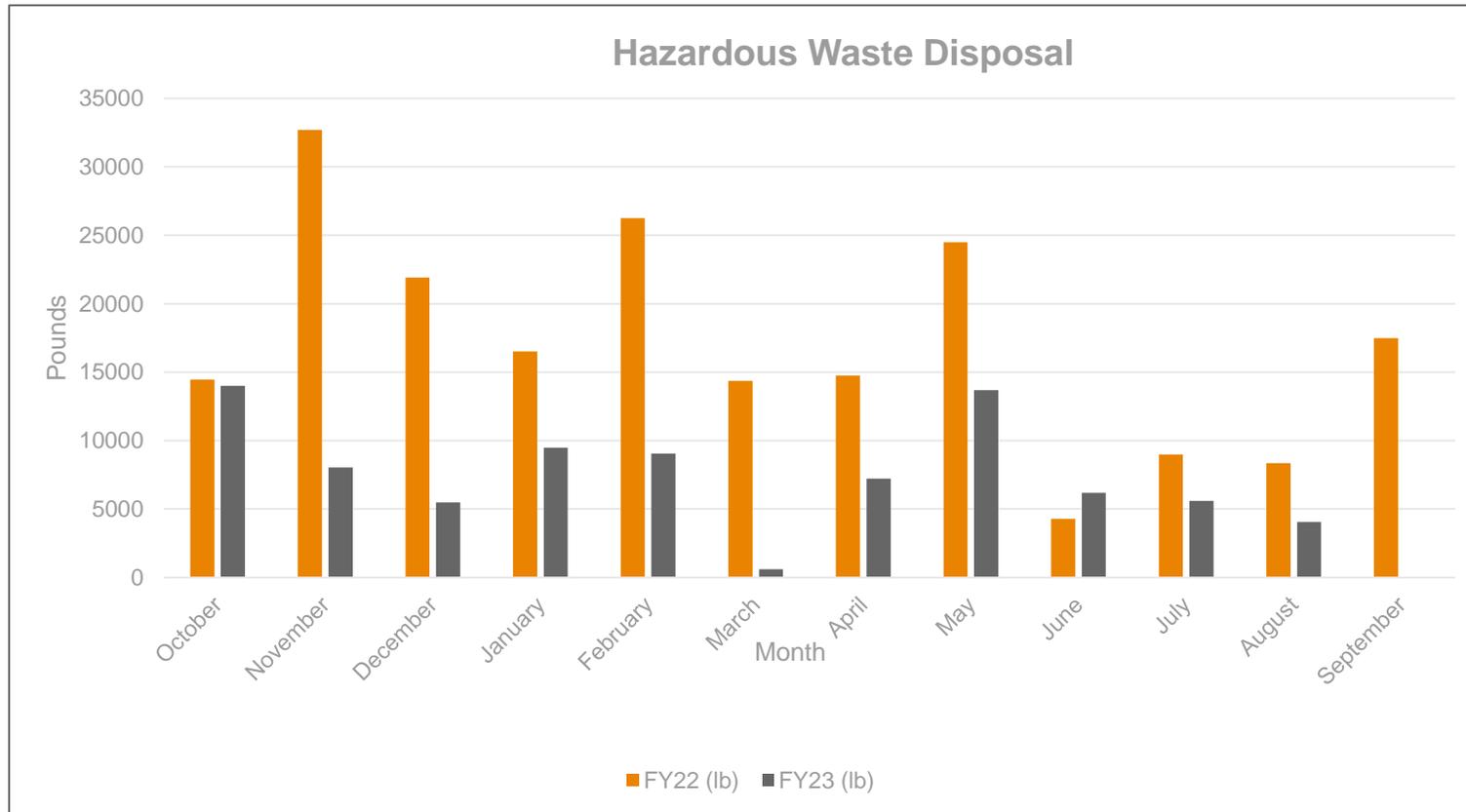
Reduction is a result of:

- Improved rinsing with removal of evaporators and addition of 7-stage rinses
- Waste stream reclassification and segregation after generation
- Implementation of SWI for process sustainability

FY23 is currently tracking a 35,543 pound reduction against our goal of 33,226 pound reduction. This is a 61% reduction in waste stream 17 year over year!



Hazardous Waste Disposal FY22 to FY23



Hazardous Waste Disposal			% Change
Month	FY22 (lb)	FY23 (lb)	
October	14463	14009	3.14%
November	32698	8033	75.43%
December	21908	5478	75.00%
January	16522	9473	42.66%
February	26264	9056	65.52%
March	14363	601	95.82%
April	14748	7225	51.01%
May	24482	13686	44.10%
June	4295	6176	-43.80%
July	8982	5597	37.69%
August	8357	4066	51.35%
September	17485	262	As of 9/13/23
Overall Change FY23			44.6% decrease
Goal FY23			17% decrease



Questions?

Thank you!

EVERY CONNECTION COUNTS



WHEN
TECHNOLOGY
CONNECTS,
SO DOES HUMANITY.

EVERY CONNECTION COUNTS

