



ISO 9001:2008
AS 9100C
ISO 14001:2004
ISO 13485-2016



Hazardous Waste Reduction Precious/ Non-Precious Metals



- ▶ Ben McKnight: EHS Director
- ▶ We are a Precious Metal Plating Company
- ▶ Located in Franklin Indiana
- ▶ Established in 1959
- ▶ 75 people at current facility
- ▶ New Locations
 - ▶ – Lexington SC 10–15 people
 - ▶ – Nantong China 15–30 people



- ▶ Reclaim \$1.0 – 1.5million dollars per year
- ▶ SQG < 2,200lbs/Month
- ▶ We would ship between 1200lbs–1500lbs per month for most months but could peak at 2000lbs on occasions.
- ▶ Freight costs between \$800 – \$1,000 per shipment.
- ▶ Refining cost of \$3.00 – \$5.00/gl.
- ▶ Difference of reclaim value between 3%–5%

Precious Metals





- ▶ HOW DO YOU FIX THIS PROBLEM
- ▶ Worked with Mark Stoddard, Roger Wilson at IDEM
- ▶ Electro-winning is an option to eliminate our shipping out of gold and silver Hazardous Waste for reclaim.
- ▶ Remaining liquid can be added to our existing WWT pretreatment system and is an approved process through the EPA.



- ▶ Annual shipments in 2014–2015 13,337lbs of gold and silver solutions/Solids for reclaim. (Hazardous Waste)
- ▶ Annual shipments 2015–2017 395lbs. Solids filters only.
- ▶ For a 99% reduction in shipments of precious metal hazardous waste.
- ▶ Reclaimed gold for 2015–2017 1068.05toz worth \$1,315,837.60 in value at \$1232.00/toz.

Objective and Targets



2016 Environmental Objectives and Targets May 2016 - May 2017

	Objectives	Champion	Target	Target Date	Status
1	Gold - Waste	Ben McKnight	Maintain Gold Reclaim 2016-2017	May-17	
2	Silver - Waste	Ben McKnight / Ted Funk	Maintain Silver Reclaim 2016-2017	May-17	
3	TriMetal	Ben McKnight / Ted Funk	Reclaim- Reduce the TriMetal sent to waste by 25 %	May-17	
4					
5					

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- ▶ Savings for the fiscal year 2015 – 2017
19,745lbs of gold and silver processed for reclaim as of end of April 2017.
- ▶ Cost Savings \$6,918 processing costs at \$3.00/gl, \$19,200 freight at 800.00/shipment.
- ▶ Gold processed 1068.05toz at 4% = \$52,631.04 difference at \$1232.00/toz from smelter.
- ▶ Reclaim value went from 97% to 99% = \$26,315.52 savings
- ▶ Total savings of 2015–2017 = \$105,064.56

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- ▶ Trimetal
- ▶ Savings for the fiscal year 2016 – 2017
20,497 lbs of TRIM3 processed through reclaim as of end of April 2017.
- ▶ Cost Savings \$8,784.02 WWT costs of treating concentrated TRIM3
- ▶ Shipped 850gls off site fiscal year 2015–2016
- ▶ Shipped 0gls off site fiscal year 2016– 2017

1800 Commerce Parkway



Questions?

