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METALS & MATERIALS

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Mikayla McAweeney, Manufacturing Excellence Process Engineer

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FONTAINEBLEAU, LAS VEGAS MAY 13-15, 2025

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CMC™

Scrap to Sustainability: Leveraging Seeq's Reporting for Enhanced Recycling Efficiency

Mikayla McAweeney

Manufacturing Excellence Process Engineer

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CMC: More Than Just Rebar

T-Post

Metal Recycling

Steel Production

Ground Improvement Solutions (Tensar®)

Construction Services

Fabrication

Bridge Systems (InQuik® Bridges)

Impact Metals

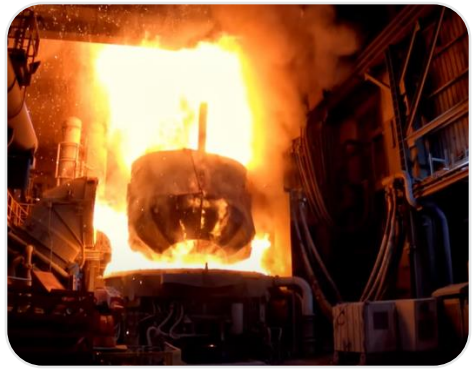
CMC: Industry Leaders Focused in Sustainability

Investors in a Sustainable Future

- **100% recycled scrap** is used to produce our products
- We **reuse 95% of water** in our manufacturing processes

Innovative Steelmakers

- Use **82% less energy** than traditional steelmakers
- Our process produces **64% less CO_2** per ton of steel



Industry Leaders

- **First in the world** to successfully operate a highly energy-efficient micro mill
- **First producer** of spooled rebar in the U.S.
- **First and only producer** of CryoSTEEL in the U.S.
- **First in the industry** to successfully produce three and five slit process rebar

CMC’s Recycling Process

Some Images on slide are sourced from : https://www.wendtcorp.com

Hands Up!

How many of you have multiple reports running at any given moment?

How many of you have set up those reports yourself?

How difficult was it for you to retrieve your data?

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First Professional Project

Update a Daily Report for CMC Recycling Lexington

Need to understand jython scripting and the other applications reporting tools

Need to understand how databases work and are connected to our data and report

Need to define the requested data and create new tags

Running report does not show any calculated data

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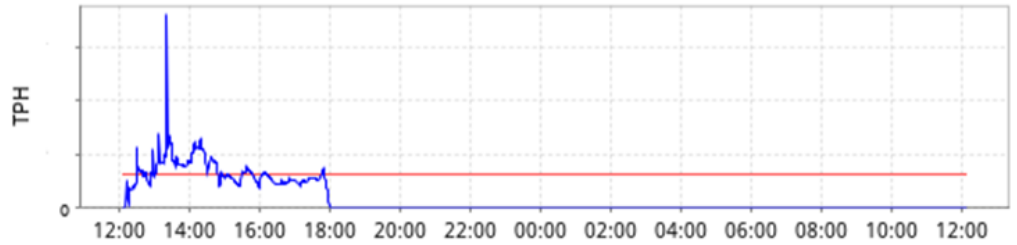
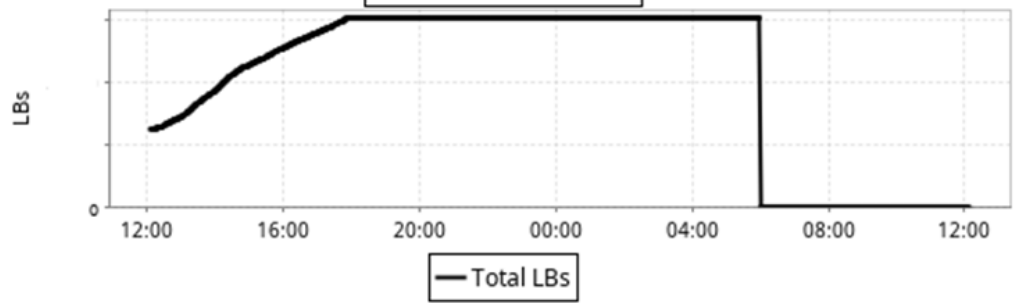
CMC Recycling Lexington
Wire Chopper Report





Time	M42 Wts
	<NA>

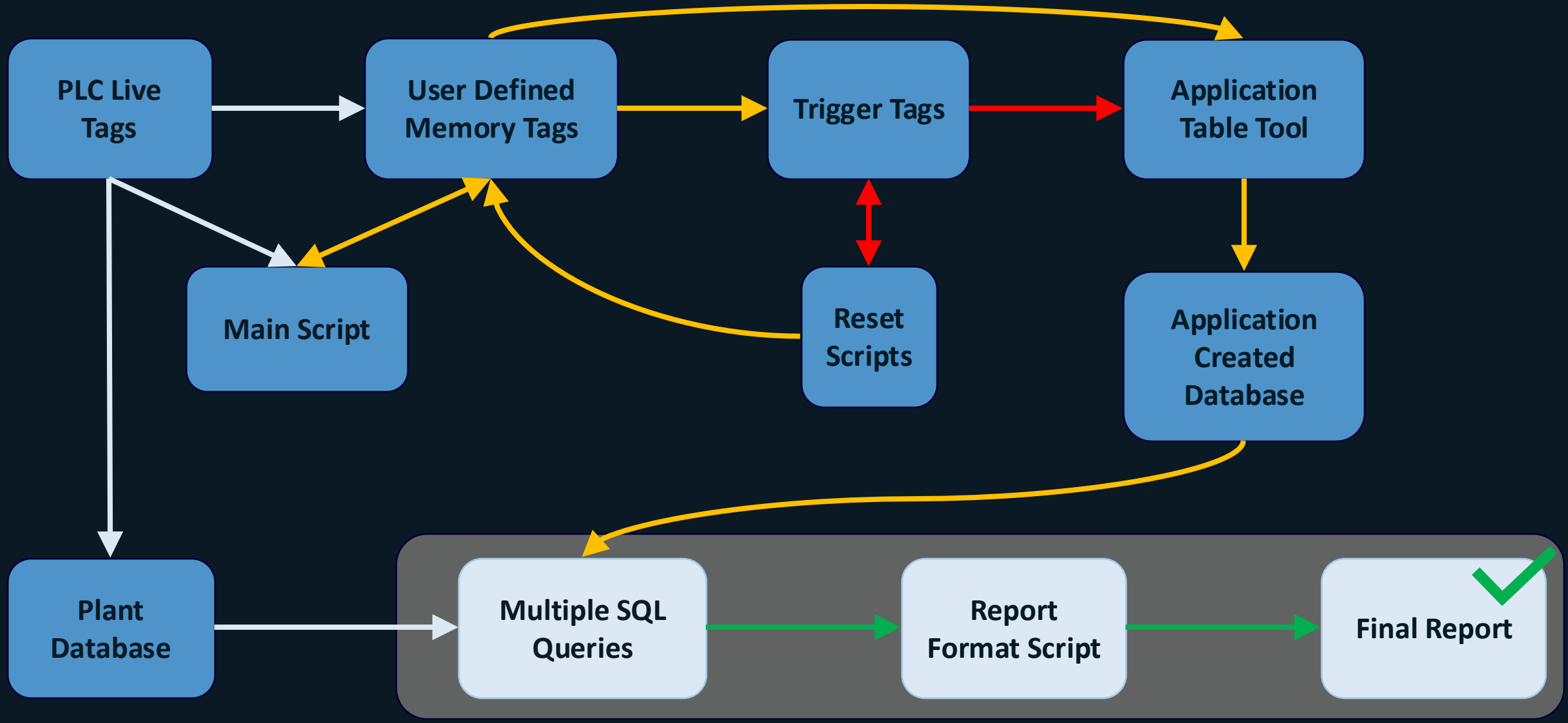
Time	M43 Wts
	<NA>

Time	M52 Wts
	<NA>

Time	M53 Wts
	<NA>

Time	M58 Wts
	<NA>

Report Setup Explained: An In-Depth Look



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Seeq Organizer Revolutionizes Reporting at CMC Recycling Lexington

CHALLENGE

Report misses peaks of interest, lacks interactive graphs, and uses multiple complex scripts and tags for simple data retrieval.

SOLUTION

Utilize Seeq's user-friendly tools to replace complex scripts, accurate data retrieval, and create a more interactive report.

RESULTS

CMC Recycling Lexington leverages Seeq's dynamic reporting tools to enhance wire chopper machine maintenance, allowing them to proactively investigate periods of interest with a simple click on the graphs.

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Critical Report Criteria

Accessibility: Ensure the report is easily accessible to all users.

Easy to Update: Simplify the process of updating the report and adding employees to the email list.

Shift Separation: Separate the report data by shift.

Event Counting: Count events for each individual current trend.

Daily Distribution: Schedule the report to be sent out every morning.

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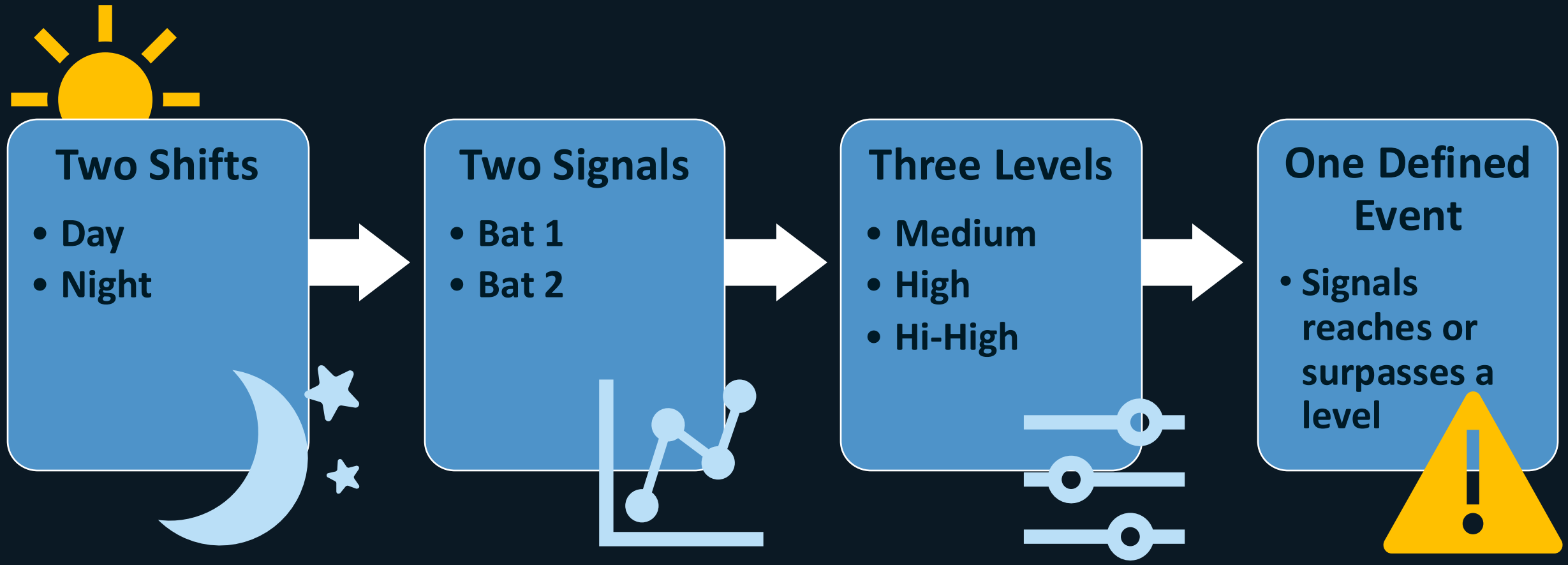
Core Principles of the Wire Chopper Analysis



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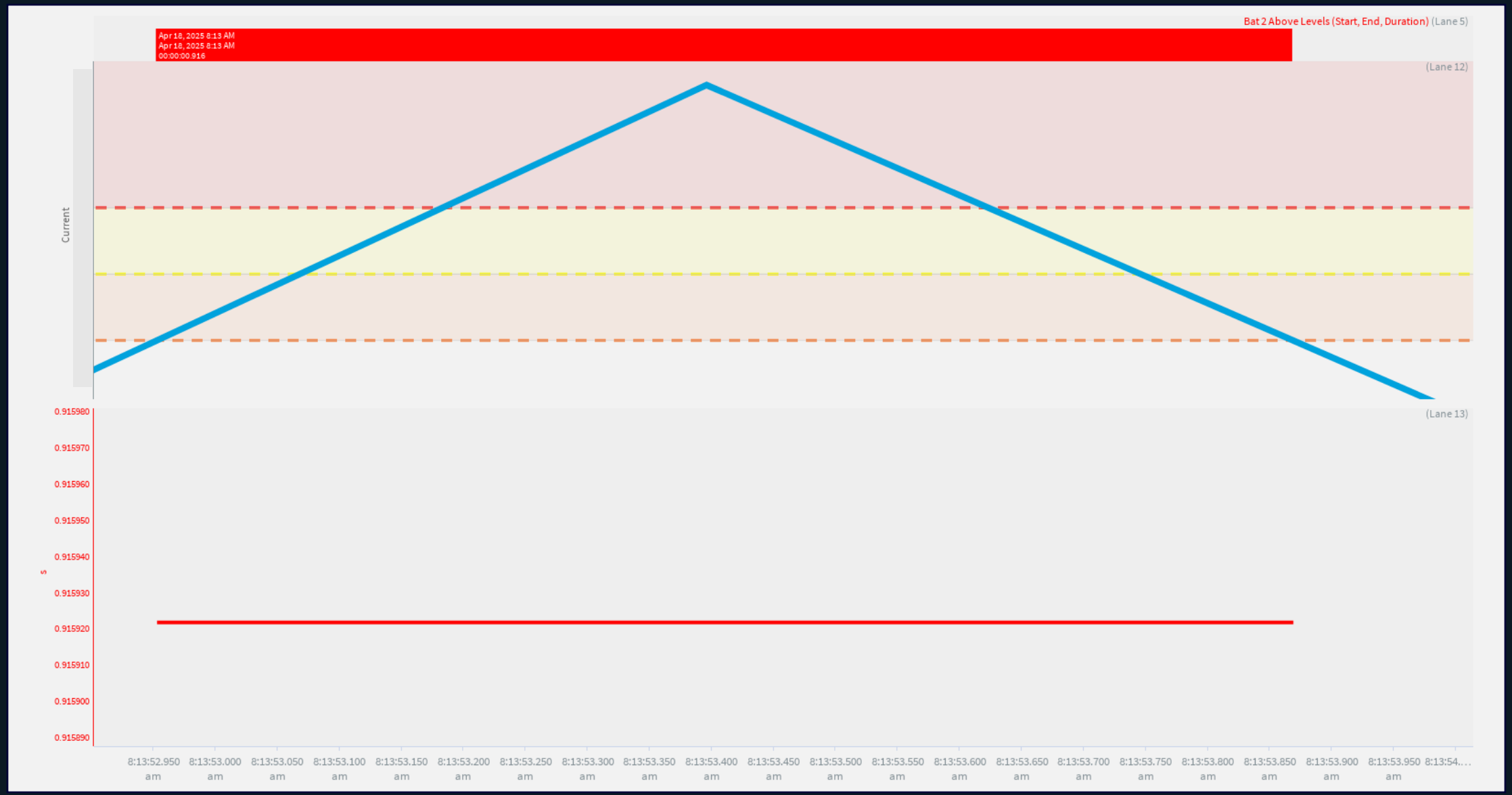
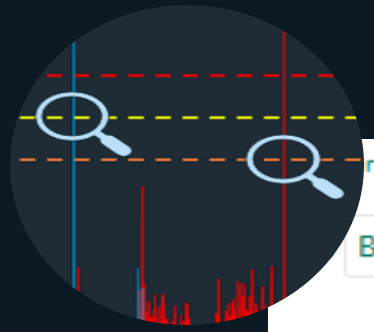
CMC Recycling Lexington Wire Chopper Trends



Defining The Wire Chopper Events



rview » Identify » Value Search

Bat1_Over_Medium

Select a signal to search

Bat1

Select a search type

Simple Advanced

>< between

Upper limit

<= Bat_Yellow_High

Lower limit

>= Bat_Medium

Ignore signal gaps

Ignore short capsules/gaps

Cancel Execute

Overview » Quantify » Signal from Condition

Bat1_Medium_ShiftA_Count

Select a signal or condition

Bat1_Over_Medium

Maximum capsule duration

40 hour(s)

Select the summary statistic you want to plot

Count

Number of samples or capsules

Select a bounding condition

ShiftA

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Final Report

CMC Recycling Lexington Wire Chopper Report

2/18/2025 - 2/19/2025

Bat 1 and Bat 2 Current Trends

Bat 1 and Bat 2 Current Event Counts

Shift A

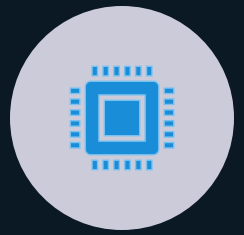
Shift A Bat # Over Setpoint	Feb 18, 2025 6:45 AM - Feb 18, 2025 5:45 PM
Bat 1 > Medium	2
Bat 1 > High	2
Bat 1 > Hi-High	1
Bat 2 > Medium	6
Bat 2 > High	5
Bat 2 > Hi-High	2

Shift B

Shift B Bat # Over Setpoint	Feb 17, 2025 8:30 PM - Feb 18, 2025 6:45 AM	Feb 18, 2025 8:30 PM - Feb 19, 2025 6:45 AM
Bat 1 > Medium	0	0
Bat 1 > High	0	0
Bat 1 > Hi-High	0	0
Bat 2 > Medium	0	0
Bat 2 > High	0	0
Bat 2 > Hi-High	0	0

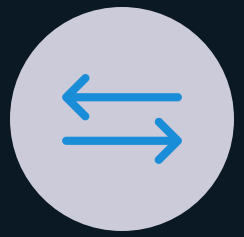
Concluding Benefits

Source data is more accessible, allowing users to investigate in detail and independently



No need for multiple scripts and tags that need to be stored to a database

Allows users to have interactive reports view real-time changes within the workbook, and make proactive decisions on the floor



Can be configured as a dashboard to monitor real-time changes by changing the execution mode

Straightforward setup that has been integrated into processes at other locations

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Final Thoughts and Recommendations

Consider the End Users

Will they be able to investigate received data easily?

Simplify and Standardize

Evaluate Data Relevance

Not all data is useful; focus on what adds value.

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Questions?

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Thank You