

How TrendMiner Improves Kuraray Bayport Operations

Kyle Tillman
Kuraray America, Inc.

TrendLab
October 2025



Kuraray PovalTM

Introduction



Kyle Tillman

Day Production Supervisor
Bayport (9 Years)

Education

Lee College

- A.A.S Process Technology
- A.A.S Manufacturing Engineering

Current Responsibilities

- Production/ Maintenance liaison
- Turnaround planning
- Lean manufacturing
- Quality monitoring and improvement
- Safety and permitting

Agenda

Part 1: Operations Use of TrendMiner

1. Field Technician
2. Board Technician
3. Shift Supervisor

Part 2: Use Cases

4. Quality Monitoring
5. Field Reading Data
6. Investigation Reporting

TrendMiner Experience

Areas of use

- Normal operation
- Startup and shutdown
- Environmental monitoring
- Emergency monitoring and notification
- Incident/ abnormality investigation and reporting
- Troubleshooting
- Shutdown and turnaround planning
- Quality monitoring
- Maintenance and reliability

Field Technician

DCS Technician

Shift Supervisor

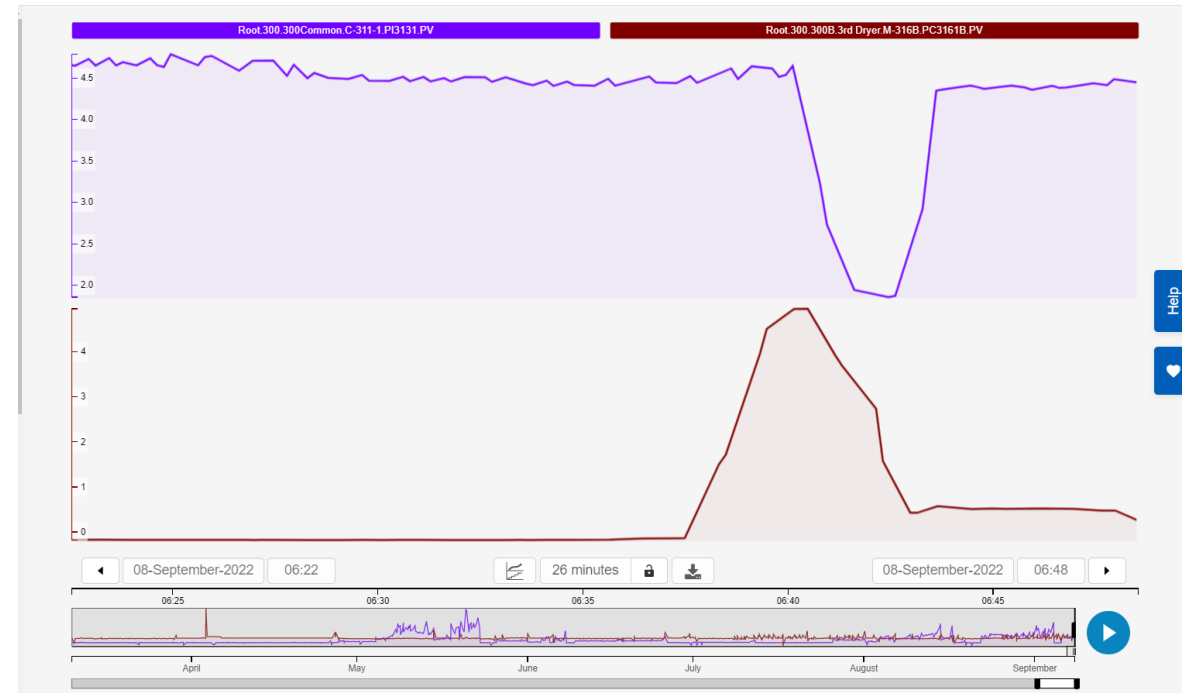
Production Day
Supervisor

Operations use of TrendMiner

How **can** TrendMiner make a **better field technician**?

Gives us a head start in operator development...

- Learn how to understand and monitor process variables
- Develop an understanding of unit specific trends before progressing to board technician
- Assist in monitoring daily tasks – enable field technician to be proactive in upcoming tasks
 - Ex: Tank transfer and batch monitoring
- Troubleshooting. The earlier they become familiar with trends the better
- In field use – Surface Pro

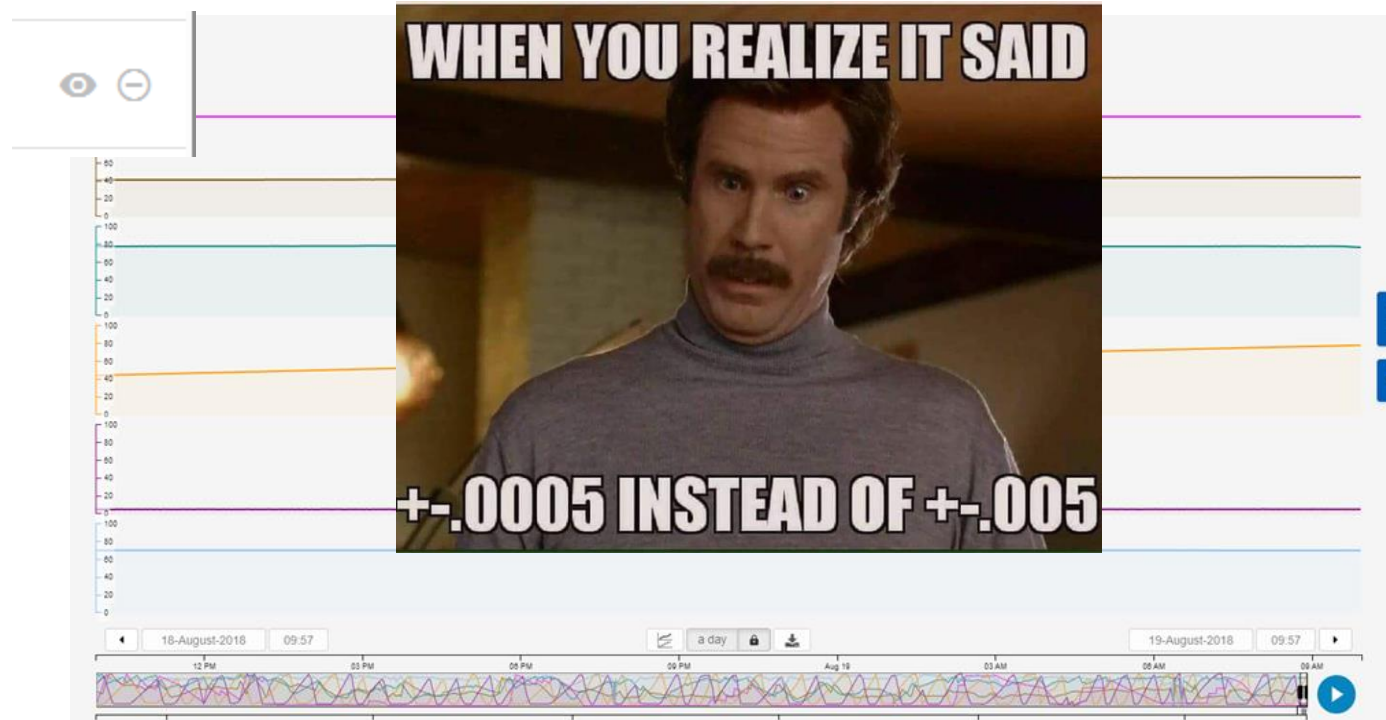


Operations use of TrendMiner

How **can** TrendMiner make a **better board technician**?

It makes us better at normal process monitoring...

- Stacking trends allows for quick correlation when monitoring and troubleshooting
- Easily add and remove tags
- Search based on description or tag number
- Easily share trends through email or MS Teams

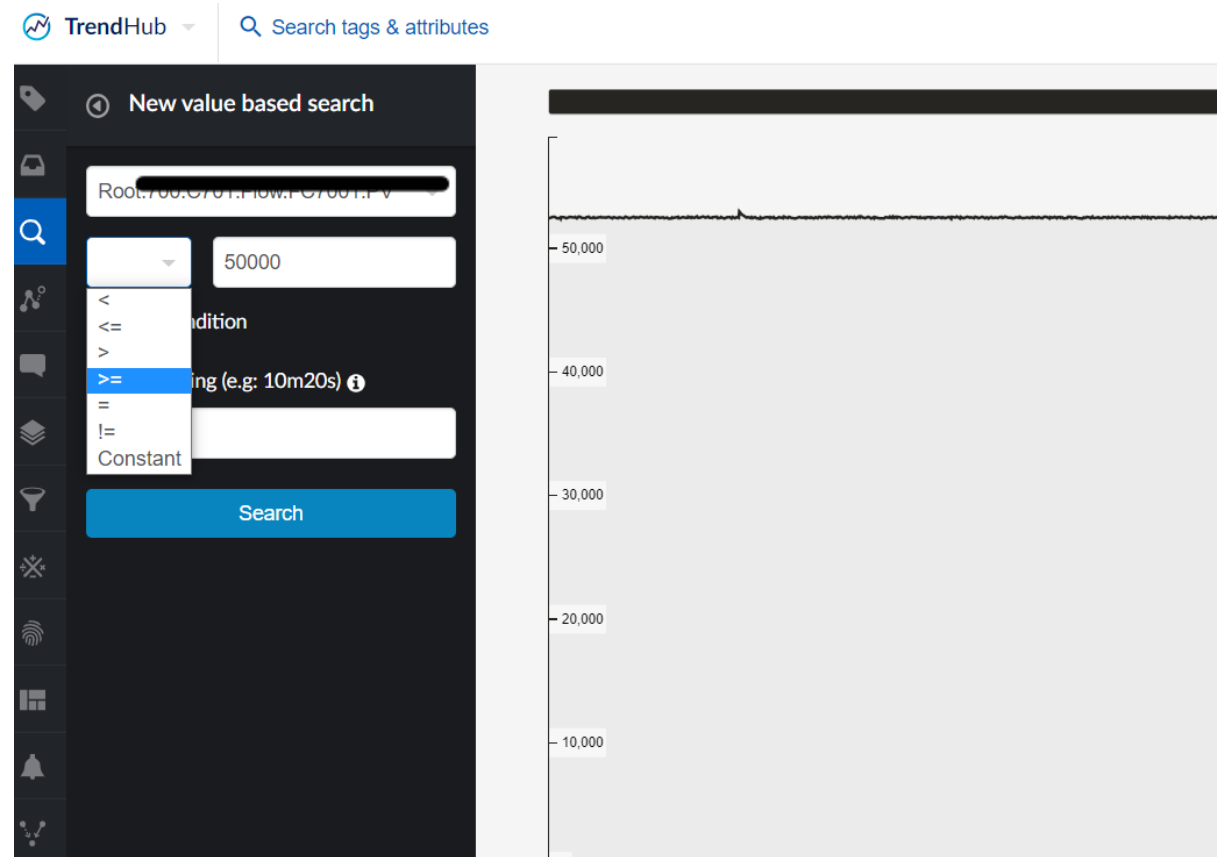


Operations use of TrendMiner

How **does** TrendMiner make a **better board technician**?

It makes us better at troubleshooting...

- More advanced trend search capabilities
- Much easier to search through timelines
- Search based on specific values
 - Troubleshooting and comparing similar situations
 - Feed rates, compositions, column profiles
 - Trending non-DCS variables
 - Lab Data
 - Field technician readings. Field indication.

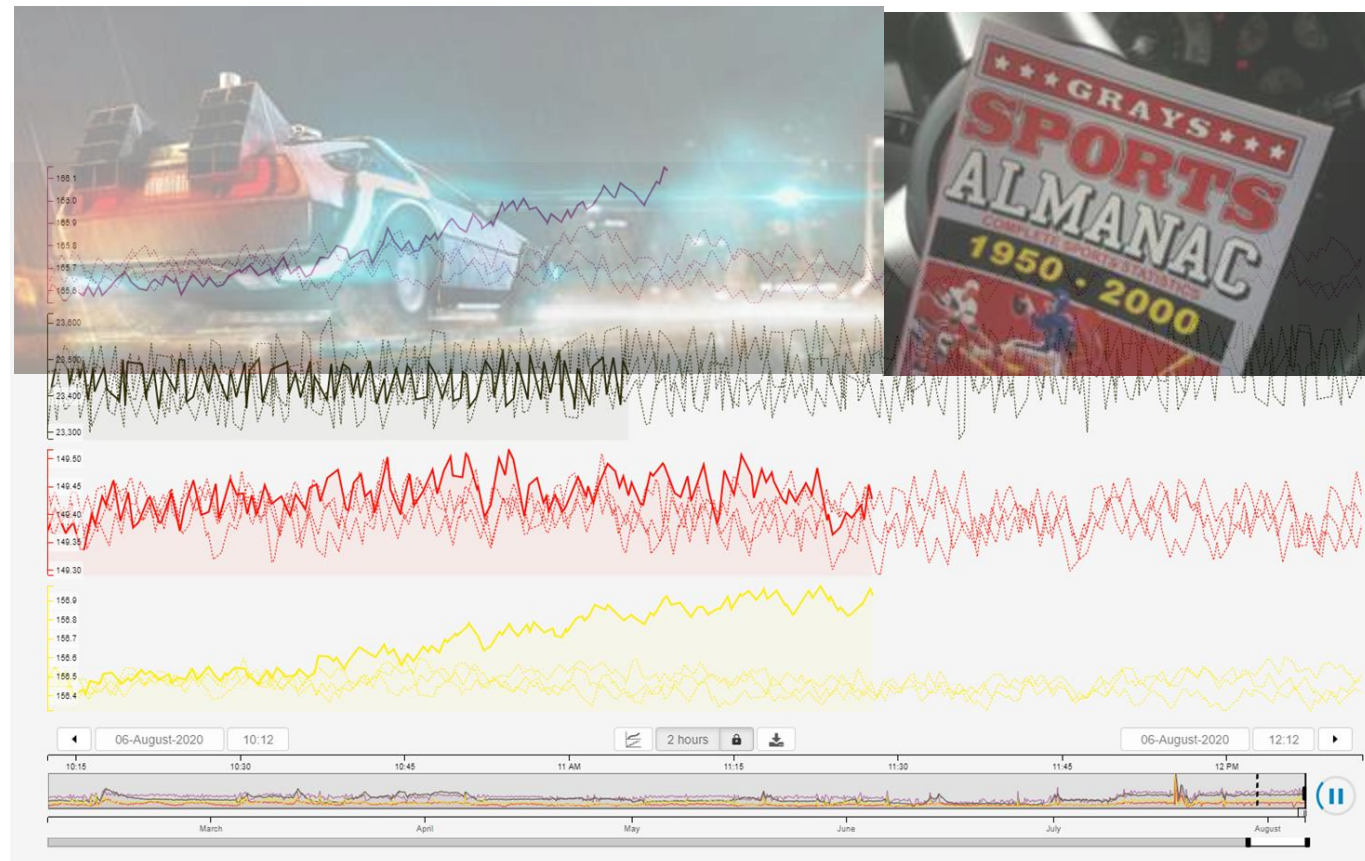


Operations use of TrendMiner

How **does** TrendMiner make a **better board technician**?

It improves timing and efficiency...

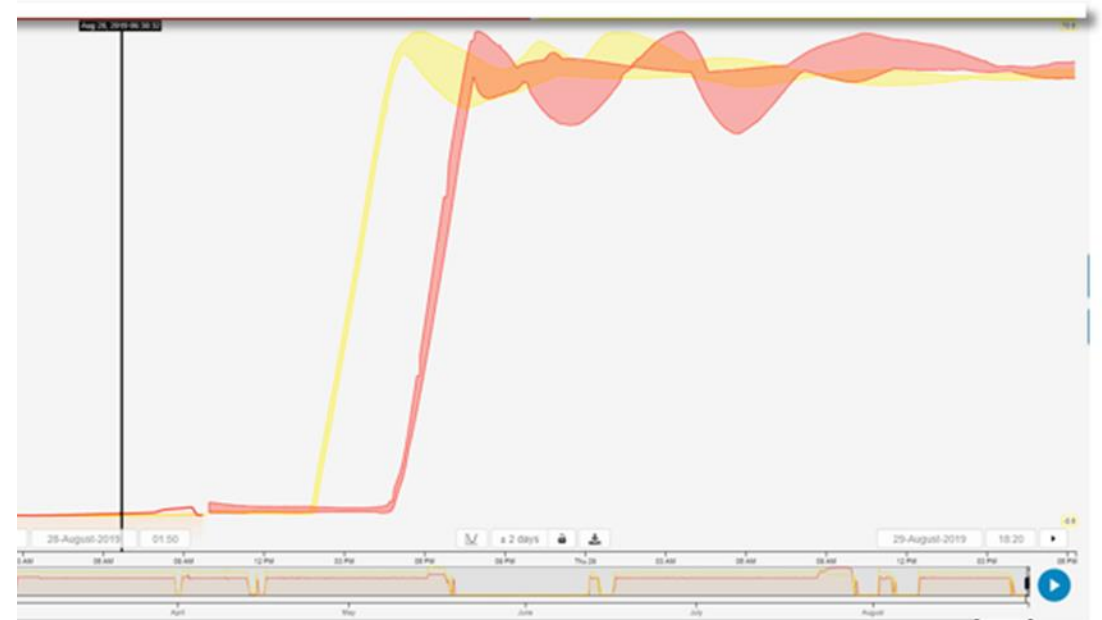
- Compare previous startups and shutdowns
 - Improved timing and planning
 - Improved communication w/field technician
- Overlay best past startup timing
 - Improved efficiency and quality
 - Less off-spec material



Operations use of TrendMiner

Technician Training and Testing

- TrendMiner training is part of the board technician training program
 - Develop troubleshooting skills
 - Improve shift changeover by increased detail
- Operators are required to show competency in unit qualification testing. This includes:
 - Searching trends
 - Troubleshooting
 - Finding similar process or grade specific data
 - Searching based on date and time

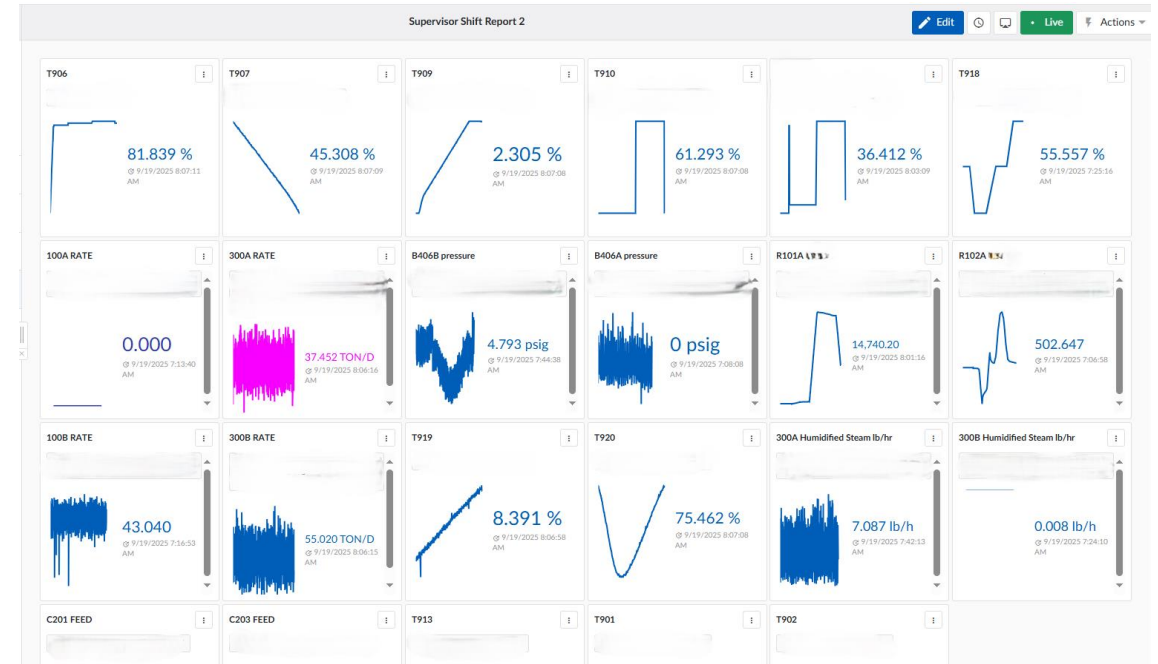


Operations use of TrendMiner

How **does** TrendMiner make a **better Shift Supervisor**?

It makes process overview simple and customizable...

- Dashboards allows supervisors to monitor important process data
- Easily add monitoring parameters for relevant process issues
- Notice unusual trends quickly. Simply click tile to investigate further.

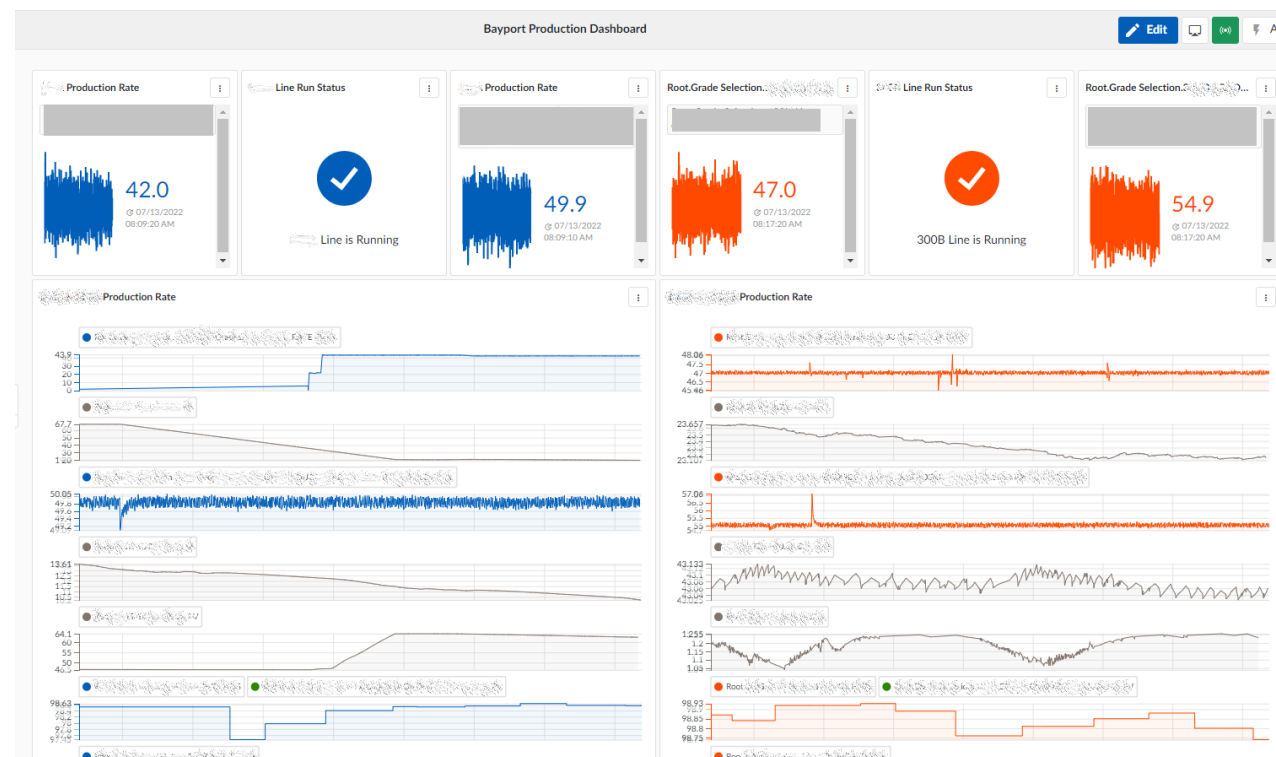


Operations use of TrendMiner

How **does** TrendMiner make a **better Shift Supervisor**?

Increased quality and production goals

- Quality dashboards allow for quick overview
- Centralized location for lab data and DCS quality monitoring
- Verify rate targets
- Easily identify quality deviations.

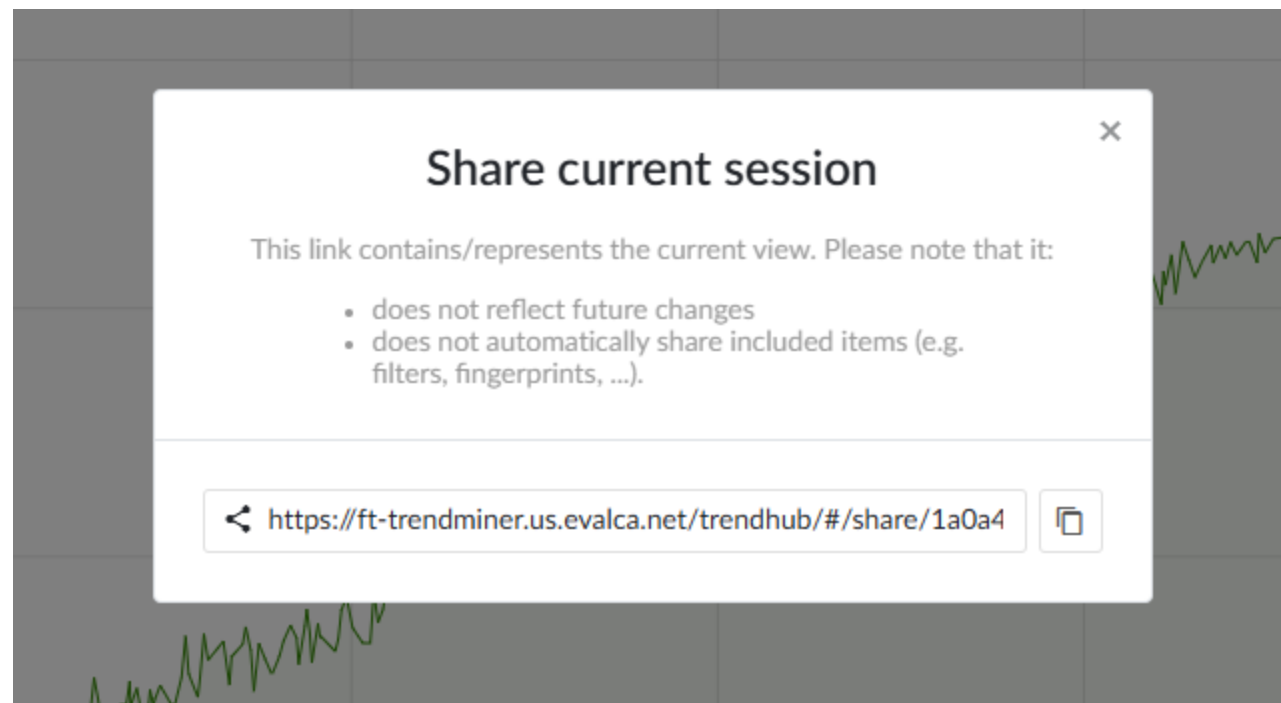


Operations use of TrendMiner

How **does** TrendMiner make a **better Shift Supervisor**?

It makes process communication easier...

- Easily share loaded trends by e-mail
- Share trends through teams
- Operators can share trends to assist supervisors with shift reports
- Supervisors can share trends to assist operators with troubleshooting

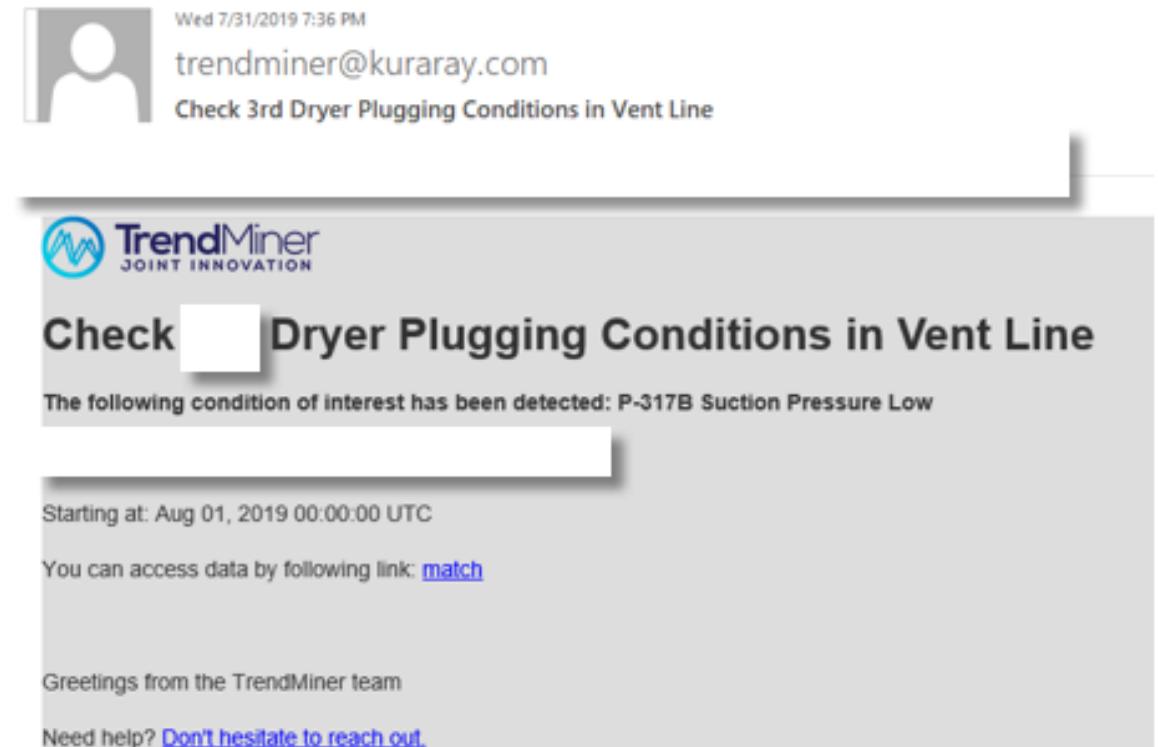


Operations use of TrendMiner

How **does** TrendMiner make a **better Shift Supervisor**?

Proactive E-mail alerts allow supervisors to make important decisions before issues cause bigger problems...

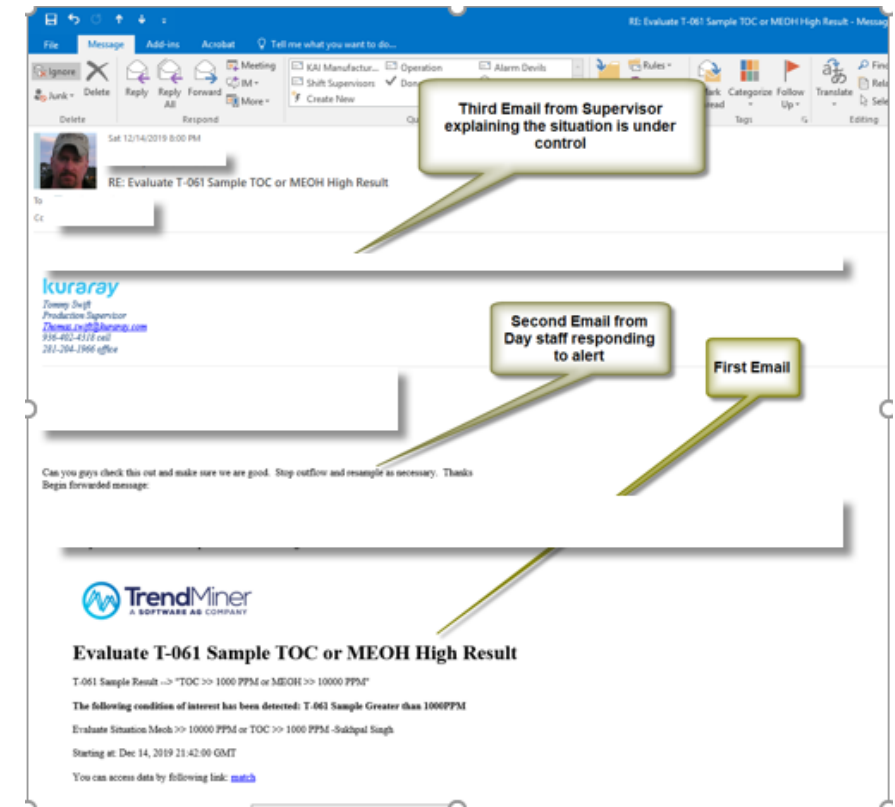
- Respond to plant issues through e-mail thread
- Collaborate with management team with group alerts
- Alert necessary departments regarding specific conditions
 - Engineering and maintenance
 - Environmental
 - Safety
 - Material orders



Operations use of TrendMiner

How **does** TrendMiner make a **better Shift Supervisor**?

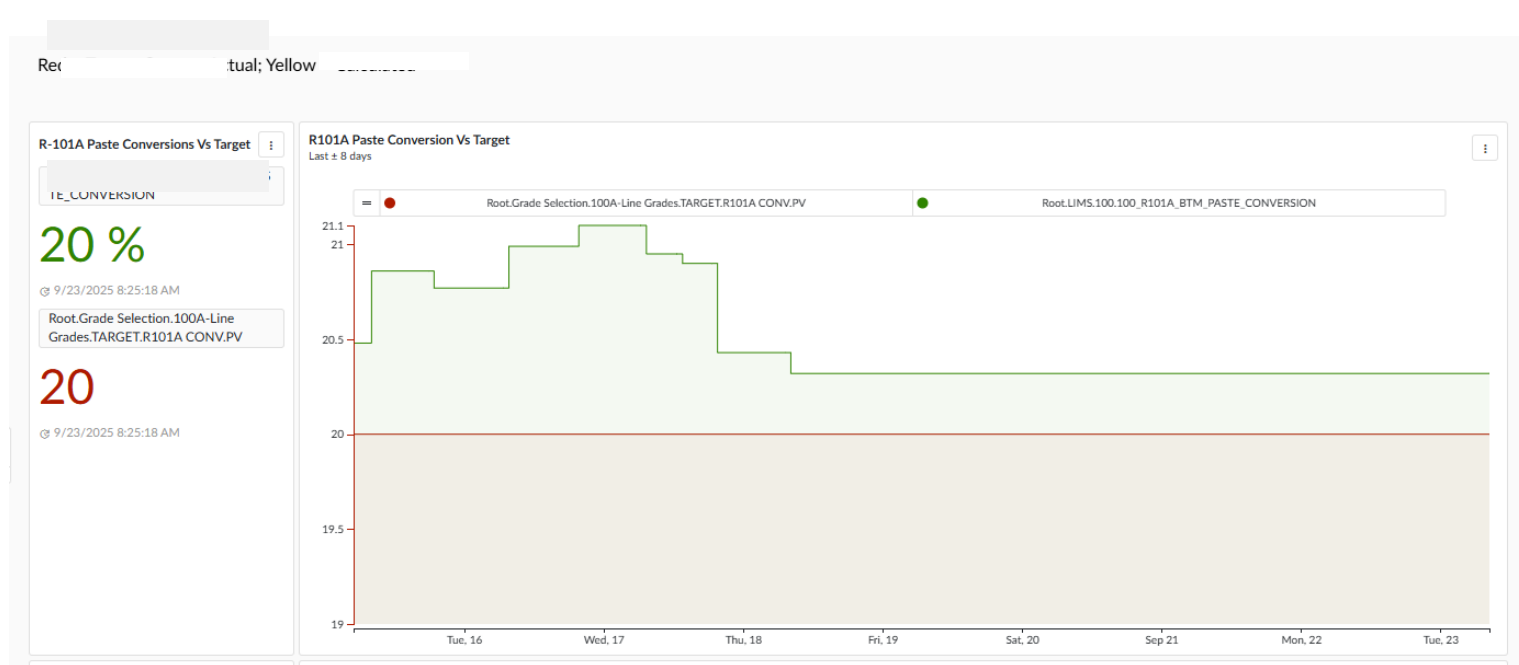
- TrendMiner reduces the amount of time it requires for supervisors to monitor the process and allows time to focus on other tasks
- Improves communication between shifts and departments
- Increased accountability and reporting
- Improved quality and decrease waste
- Alerts can help identify problems before they happen
 - Create an accountability chain that helps ensure action



Use Case: Quality Monitoring

Monitoring based on each quality marker..

- Kuraray Bayport unique grade specific data
- Over 20 different specialty grades with different characteristics and quality parameters
- Grade data and setpoint tags created for each quality point. Root tags change based on grade selection in DCS
- Lab analysis data (LIMS) is overlaid target data



Use Case: Quality Monitoring

Benefits of TrendMiner quality charts...

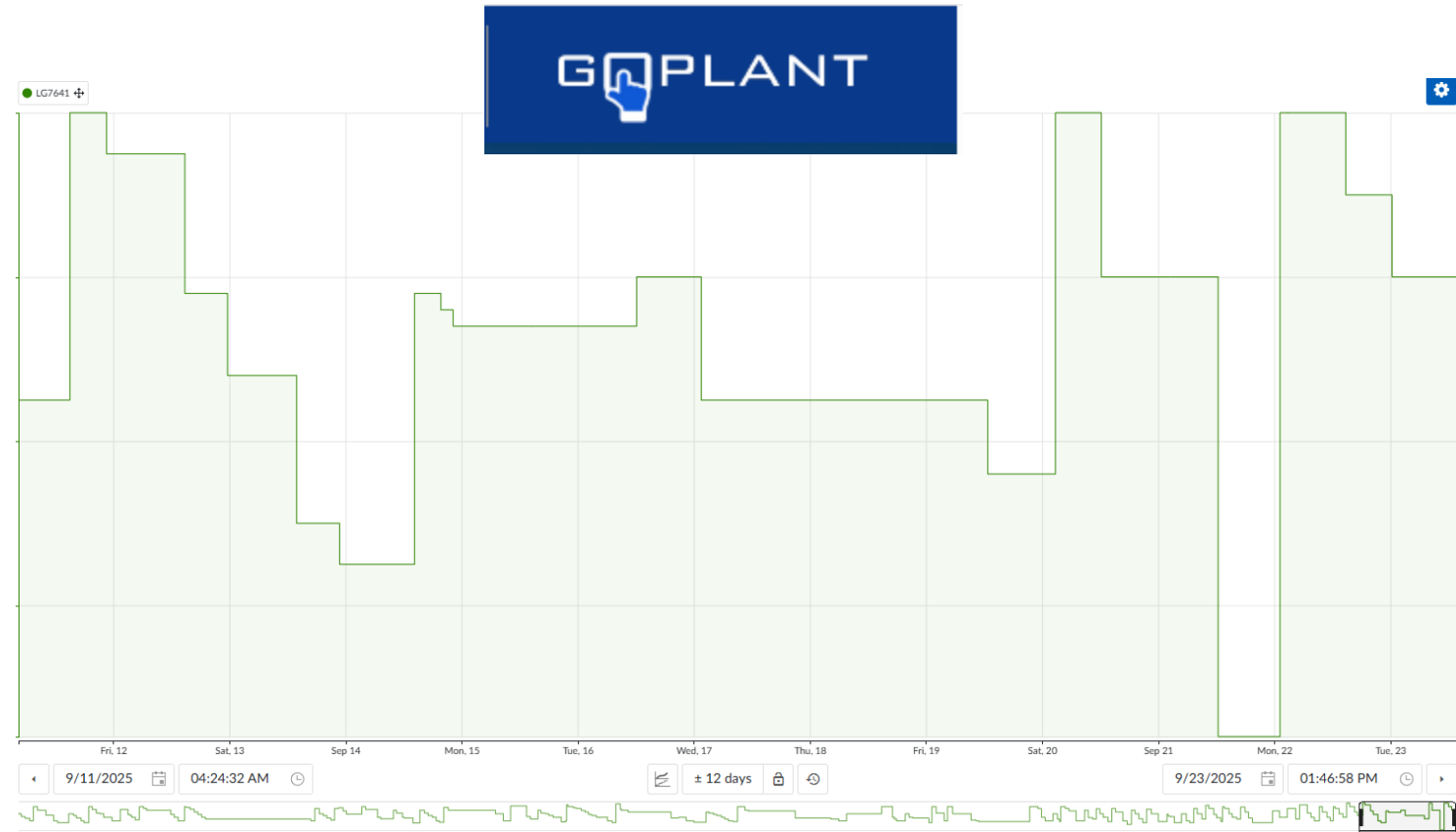
- Dashboards for each quality section
 - Quickly view daily quality results
 - Dynamic target data based on grade specific conditions
- View larger timeline to identify needed quality moves earlier
- Compare quality data easily to previous campaigns
- Allows quality monitoring team to communicate effectively to operations
- Measurable improvement in over quality



Use Case: Unit Rounds Data

Integrated field rounds and reading data

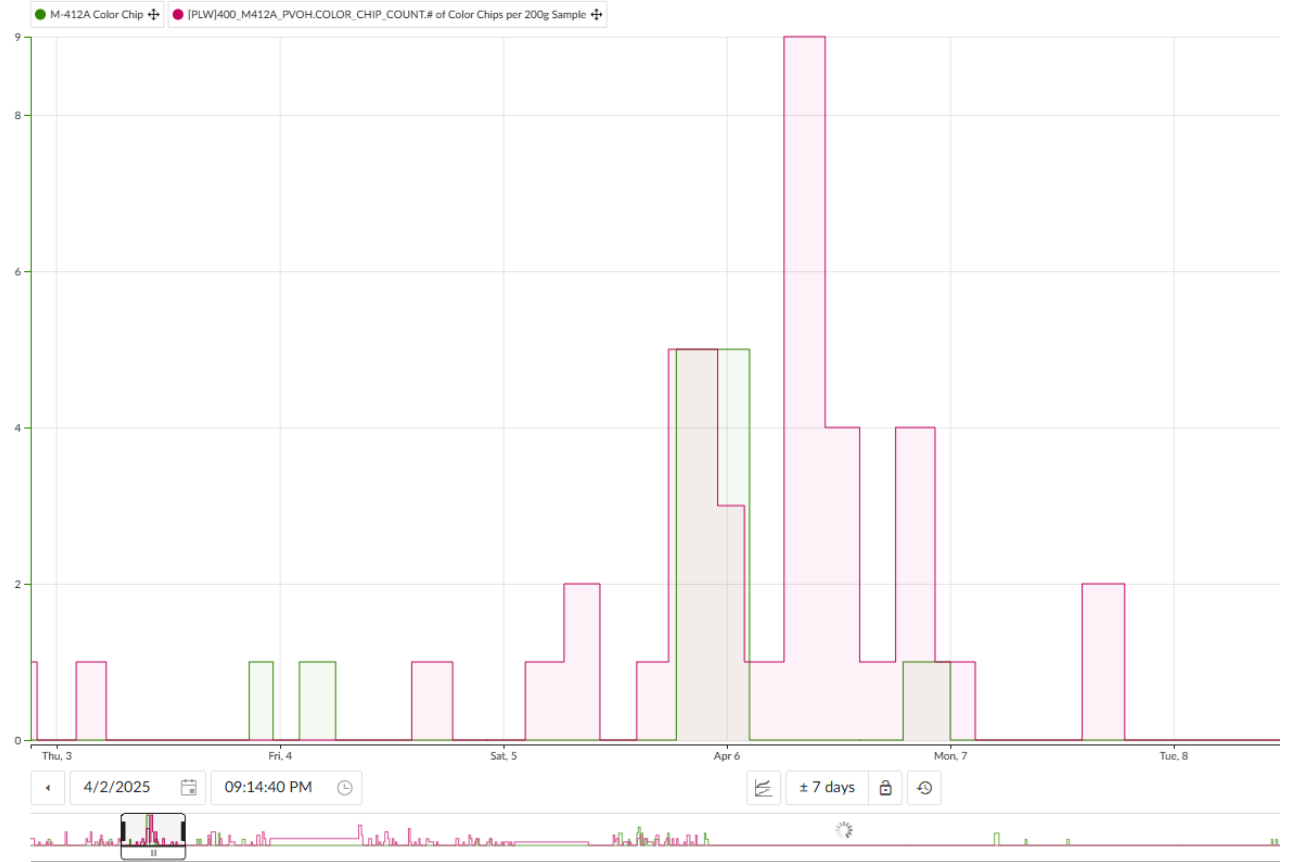
- Create tag data for GoPlant
 - This allows for non DCS readings to be trended.
- Trend technician visual verification
- Track and trend batch raw materials
- Compare operator readings to verify DCS data



Use Case: Unit Rounds Data

Integrated field rounds and reading data

- Compare and trend visual inspections between operations and lab
 - Higher consistency on accountability and reporting
 - Enables lab and operation to identify areas that need additional monitoring
 - Data used for quality reporting



Use Case: Investigations

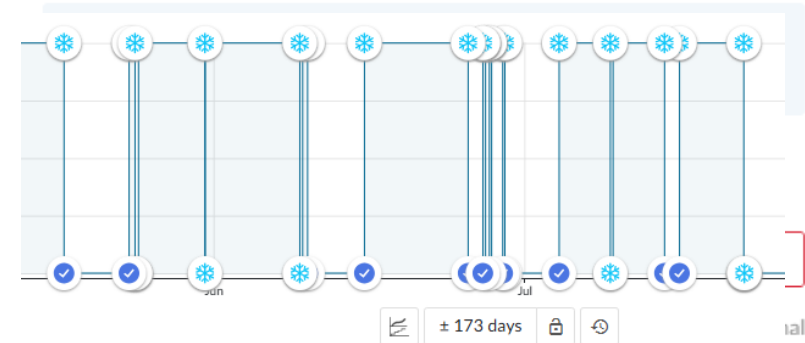
- Context items notes help with future investigations
 - Notes added to trends helps develop investigations
- Trends are easily added to investigation files
- Used with incident, abnormality, environmental, off-spec reporting
- Streamlined collaboration between departments and investigators

Add a context item

A context item with its events and other information will be added

CONTEXT ITEM DETAILS

Component

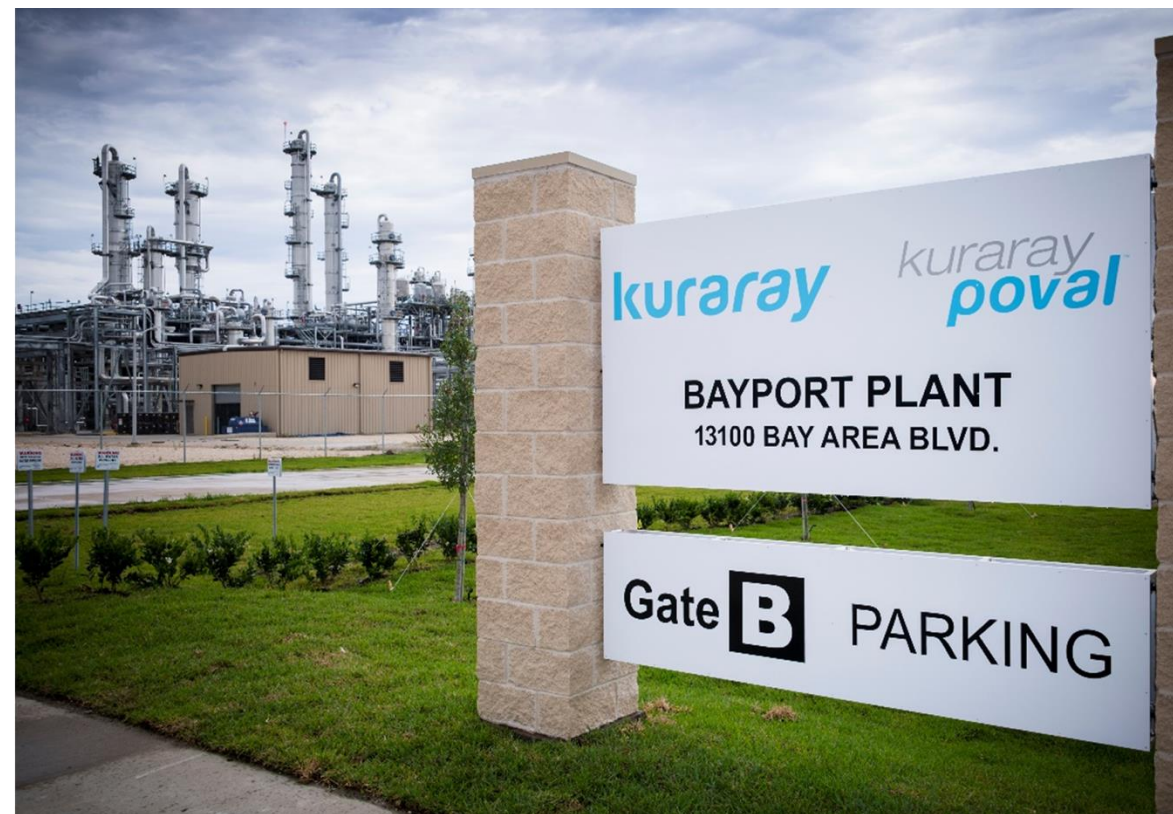


Enter a description

Keywords

Optional

Thank You! Questions?



Kyle Tillman

kyle.Tillman@kuraray.com

Day Production Supervisor

Kuraray America, Inc.

→ www.kuraray-poval.com

© Kuraray Co., Ltd. 2025

Kuraray Poval is a trademark(s) and/or registered trademark(s) of Kuraray Co., Ltd. or its affiliates. Trademarks may not be applied for or registered in all countries. The information, recommendations and details given in this document have been compiled with care and to our best knowledge and belief. They do not entail an assurance of properties above and beyond the product specification. The user of our products is responsible for ensuring that the product is suitable for the intended use and conforms to all relevant regulations. Kuraray Co., Ltd. and its affiliates do not accept any guarantee or liability for any errors, inaccuracies or omissions in this document.

kuraray

Kuraray Poval™