RFID JOURNAL LIVE!

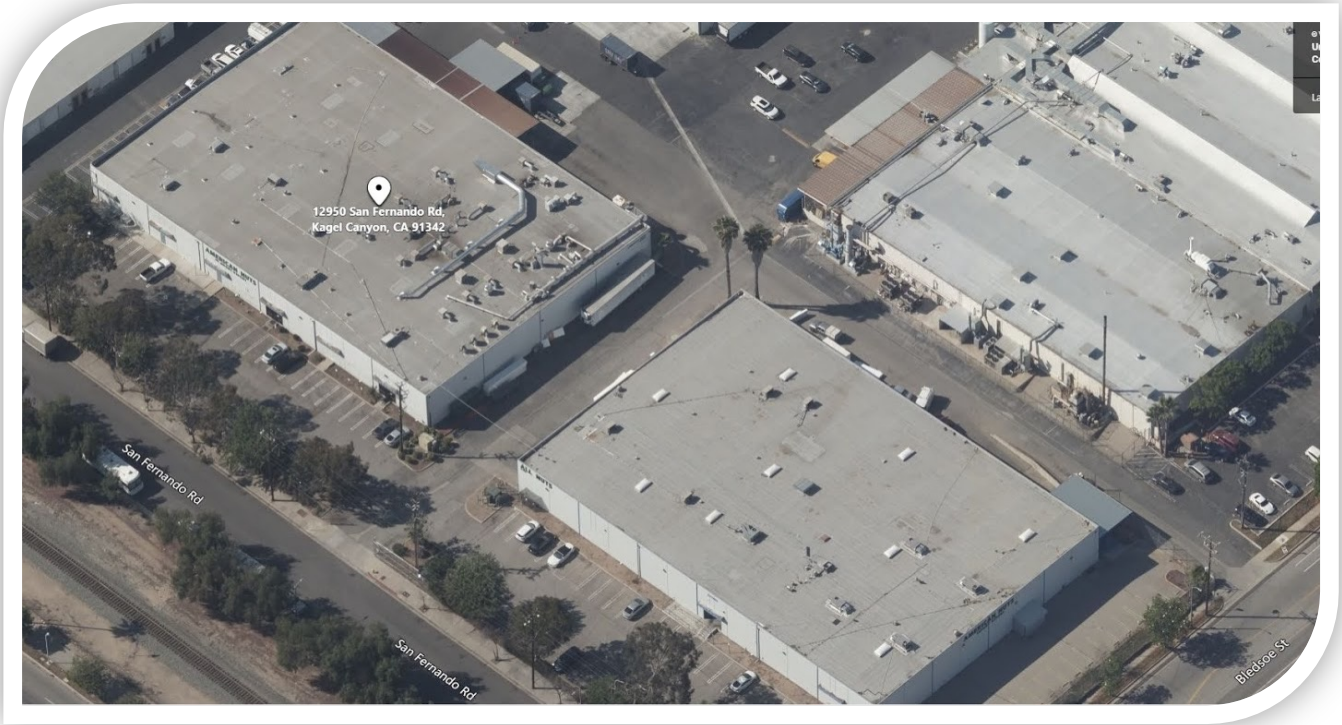
SEPTEMBER 26 - 28, 2021

PHOENIX CONVENTION CENTER | PHOENIX, AZ

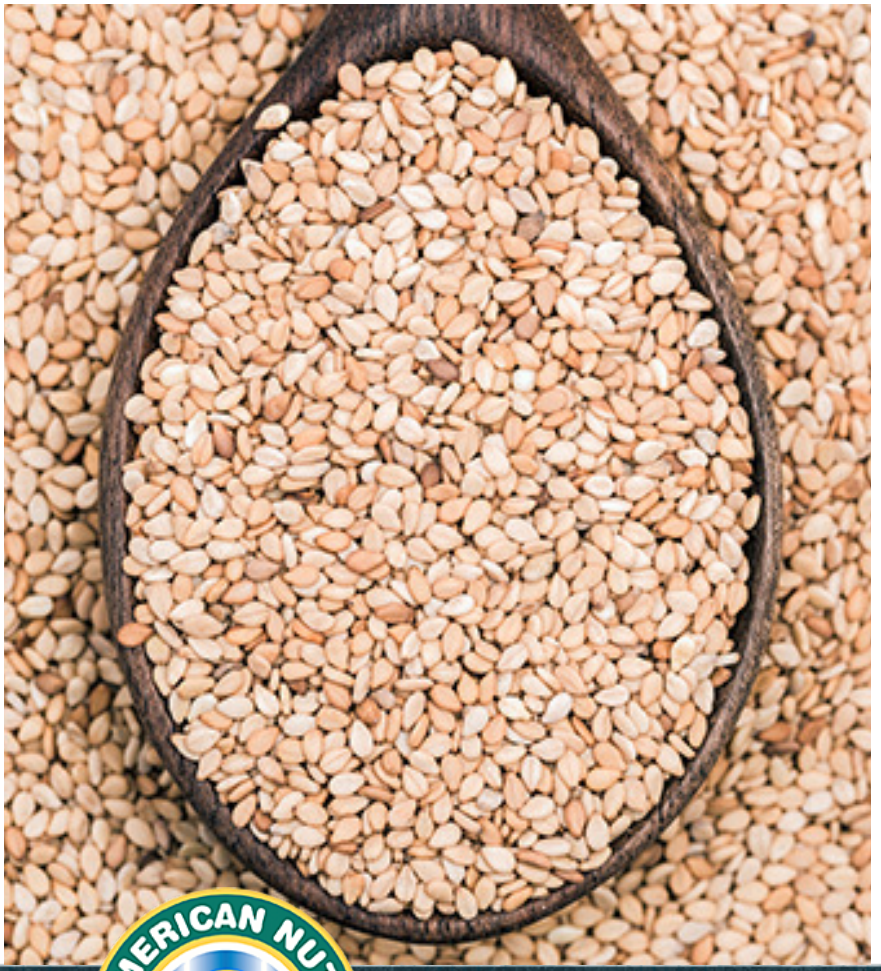
RFID Provides Efficiency, Visibility for Food Company

Nate Willits

CFO, American Nuts



INTRODUCTION



- In 2019 American Nuts, LLC ("AN", a North American top processor and packager of nuts, seeds, dried fruits and confections) approached Senitron, an RFID technology company, to develop a system which **tracks inventory using RFID tracking technology in combination with computerization of operations, supply chain and quality**

- Like many manufacturing companies, AN was using a well-known ERP system, but similar to other traditional systems, inventory data and accuracy were lacking

INTRODUCTION

- In addition, the Company was also looking to computerize all aspects of operations including shop floor controls, warehouse management, production scheduling, quality control management, and material resource planning using a centralized communication system, real-time alerts and data analytics
- AN explored various inventory control platforms (bar code scanning, RFID, etc.) and chose Senitron's Enterprise Resource Control (ERC) solution

Why ERC?

ERC by Senitron, fuses **RFID's real-time asset tracking technology with proprietary cutting-edge software**, creating an **all-in-one user-friendly** solution, design to be an ERP bolt-on; which ultimately **eliminates the need to purchase and integrate any additional modules or systems** needed to effectively run operations:

ERC:

- ✓ RFID Real-Time Inventory Tracking
- ✓ Warehouse Management System (WMS)
- ✓ Tracks Items Cost
- ✓ Production Scheduling
- ✓ WO System
- ✓ Quality Control & Disposal Management
- ✓ Material Requirement Planning (MRP)

VS

Other Systems	Integration with ERP	Integration with MRP	Integration with WHS	Customizations	Implementation & Training	Hardware	Hardware Installation
Warehouse Management (WMS)	Yes			Yes	Yes		
RFID or Bar Coding Solution			Yes	Yes	Yes	Yes	Yes
Material Resource Planning (MRP)	Yes			Yes	Yes		
Scheduling System		Yes		Yes	Yes		
Work Order System			Yes	Yes	Yes		
Quality Control System			Yes	Yes	Yes		
Disposal System			Yes	Yes	Yes		

ERC provides all the benefits of other systems while **eliminating time and complexities associated with integration of multiple systems**.

Considerations

Applicable Segments

- Retail
- Manufacturing
- Warehousing/Distribution
- Healthcare
- Personnel/Professional Services

Considerations

- Level of tracking – unit vs. case vs. pallet
- Size of installation, access to internet/power
- Ease of Use / Scalability / Installation
- Cost

Benefits Realized

- Significant increase in inventory accuracy (75% to 95%+) – link directly to ERP for enhanced reporting/control
- Lot Level tracking for cost, expiration dates, supplier, etc. allows for reduced expiration loss (FIFO) and better pricing/profitability
- Scheduling and Work Order modules provide detailed production planning, tracking and variance reporting improving productivity, efficiency and reducing scrap
- Quality module allows for traceability, control of goods on hold and formal disposal improving quality to customer and reducing hold times and space requirements

Benefits Realized

- Material Requirements Planning module pairs actual usage/sales data with customer forecasts to optimize inventory levels, reducing stock-outs and warehousing costs
- Real-time alerts, operational and financial dashboards, etc. provide ease of review and improved control

ERC Review

"ERC" RFID Designed for Manufacturing & Distribution

SENITRON RFID Solutions

AMERICAN NUTS FRESHLY ROASTED

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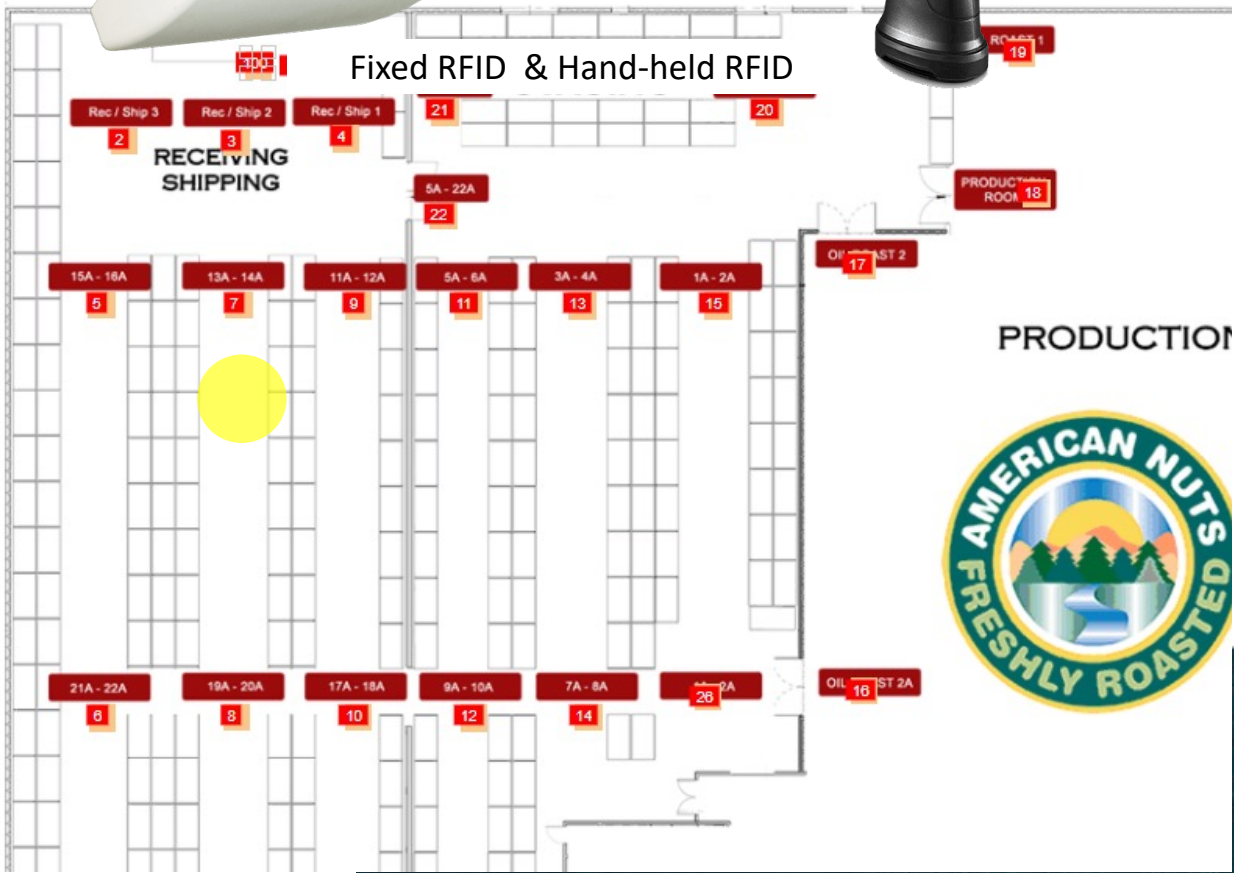
ERC Enterprise Resource Control

RFID for Manufacturing & Distribution

REAL-TIME RFID TRACKING & MOVEMENT HISTORY

Powered By SENITRON RFID SOLUTIONS

Fixed RFID & Hand-held RFID



History | Movements | Transactions | Status | MF Transactions

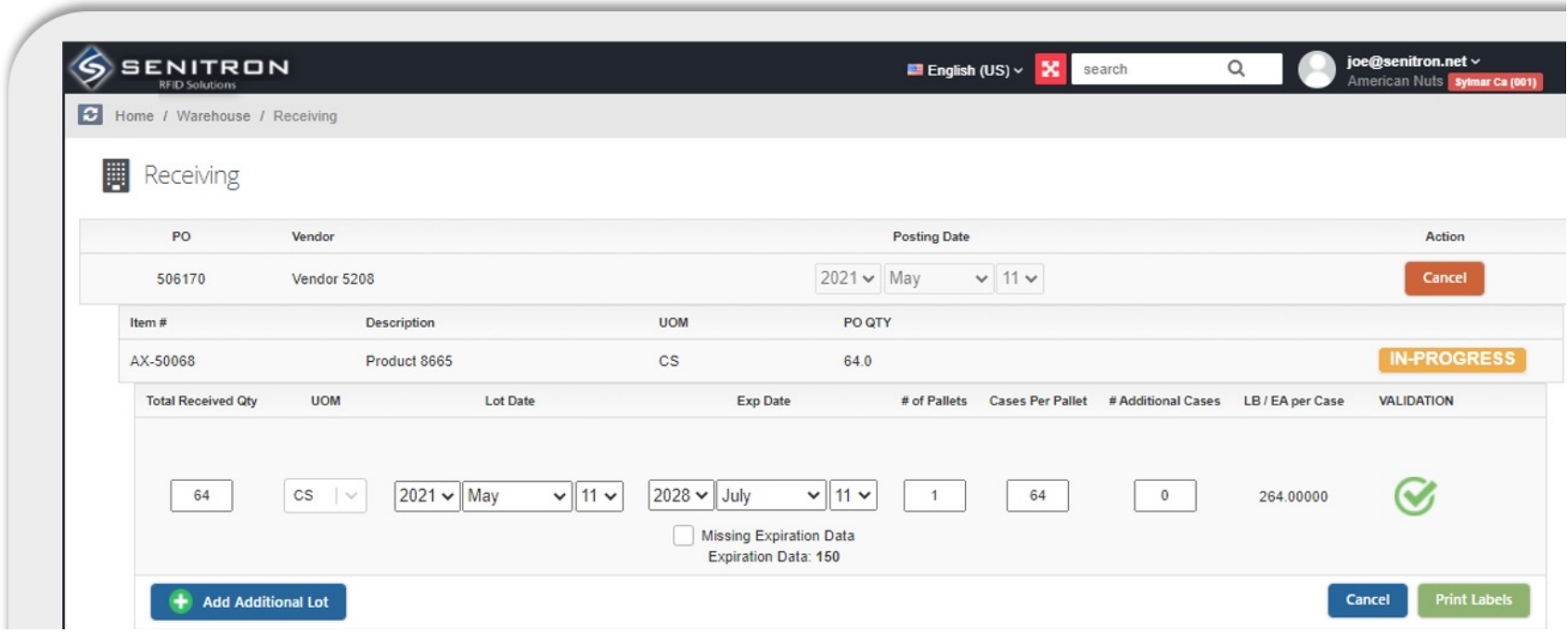
10:25 AM 10/22/2020	Moved from Building 4 Inside to HH: R1 Building 4 Inside
12:06 PM 09/09/2020	Moved from B4 : Inside to Building 4 : Inside (15401)
08:56 AM 09/09/2020	Moved from Building 4 : Inside to B4 : Inside (15401)
01:02 PM 06/29/2020	Moved from Building 1 : Receiving to Building 4 : Inside (15401)
10:28 AM 06/29/2020	Moved from to Building 1 : Receiving (10001)

WMS MODULE: RECEIVING

"ERC receiving module eliminates most receiving errors"

Process:

- Inventory arrives at facility
- Receiver inputs PO# or vendor name
- Receiver inputs quantity and other data
- RFID Labels are printed and applied to pallets



Math Validation: Employee can not receive and print labels unless math adds up.

RFID Verified: RFID readers must detect RFID label before employee can conclude receiving process.

Auto QA Hold: Set receipt to auto QA hold for selected vendors. If a tag is used while on hold, an auto email alert is sent out to QA team.

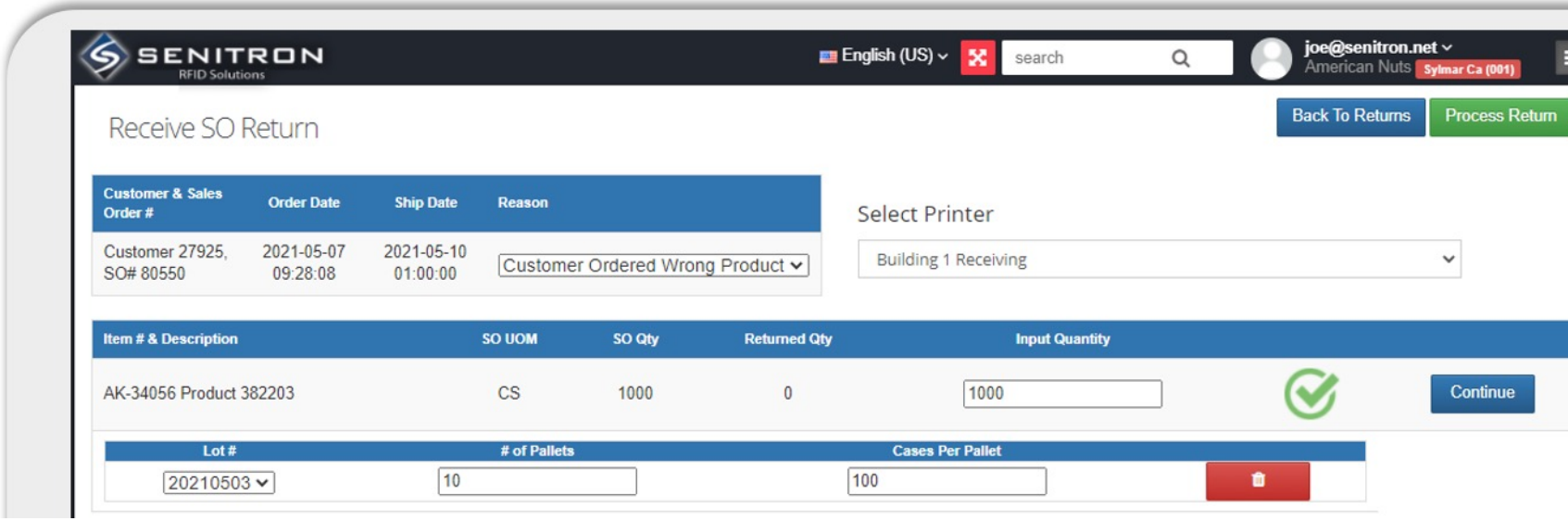
RFID Alert: Automated email alerts are sent if inventory sits in receiving area for more than a set number of days.

WMS MODULE: RETURNS

"ERC makes it easy to approve and track customer returns"

Return Process:

- Previously sold inventory arrives at the dock
- Receiver inputs SO# or client name to find SO#
- Receiver inputs quantities and other data
- RFID labels are printed and attached to returns
- Inventory added back at cost sold



Math Validation: Employee can not receive return and print labels unless math adds up.

Auto Quality Hold: Returned goods are auto placed on QC hold.

Auto Notify QC: QC team is auto notified to inspect and release returns on QH.

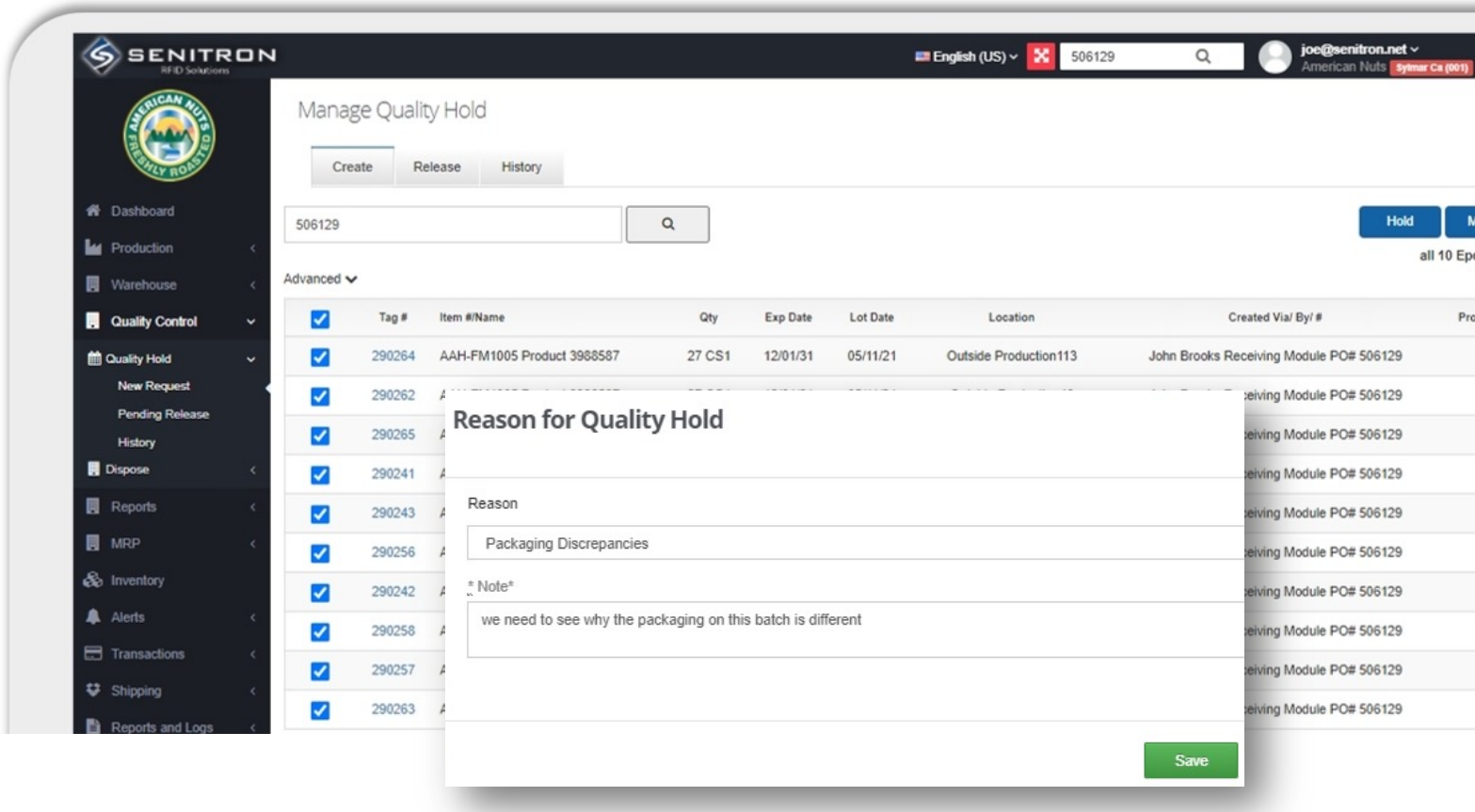
Auto Notify Accounting: A/R department is auto notified to possibly credit customer.

WMS MODULE: QUALITY CONTROL

"ERC makes Quality Control easy"

Hold Process:

- Quality team can set up to automatically or manually put item, vendor or customer on hold
- If using manual option, reason for hold is required
- System creates quality hold ID number and prints out paperwork to be applied to inventory
- Once item passes inspection quality control releases hold



Quality Hold
QH-ID #: 226
Item Name: Widget A
Lot# 123456789
Reason: Packaging Issue

Auto Notified: QC team automatically receives email notification when an item is placed on auto hold.

Management Notified: QC management automatically receives email notifications showing QC hold violations and if an item is on hold for more than a set number of days.

Auto Blocked: Inventory on quality control hold becomes unavailable for consumption and sales.

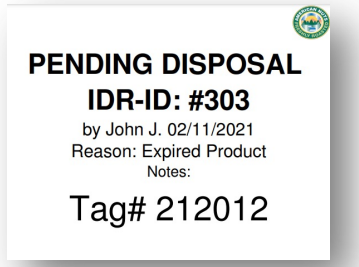
290262 On Hold	26 CS1	1056 LBS	$1.24	1,309	0	05-
290264 On Hold	26 CS1	1056 LBS	$1.24	1,309	0	05-
290265 On Hold	26 CS1	1056 LBS	$1.24	1,309	0	05-

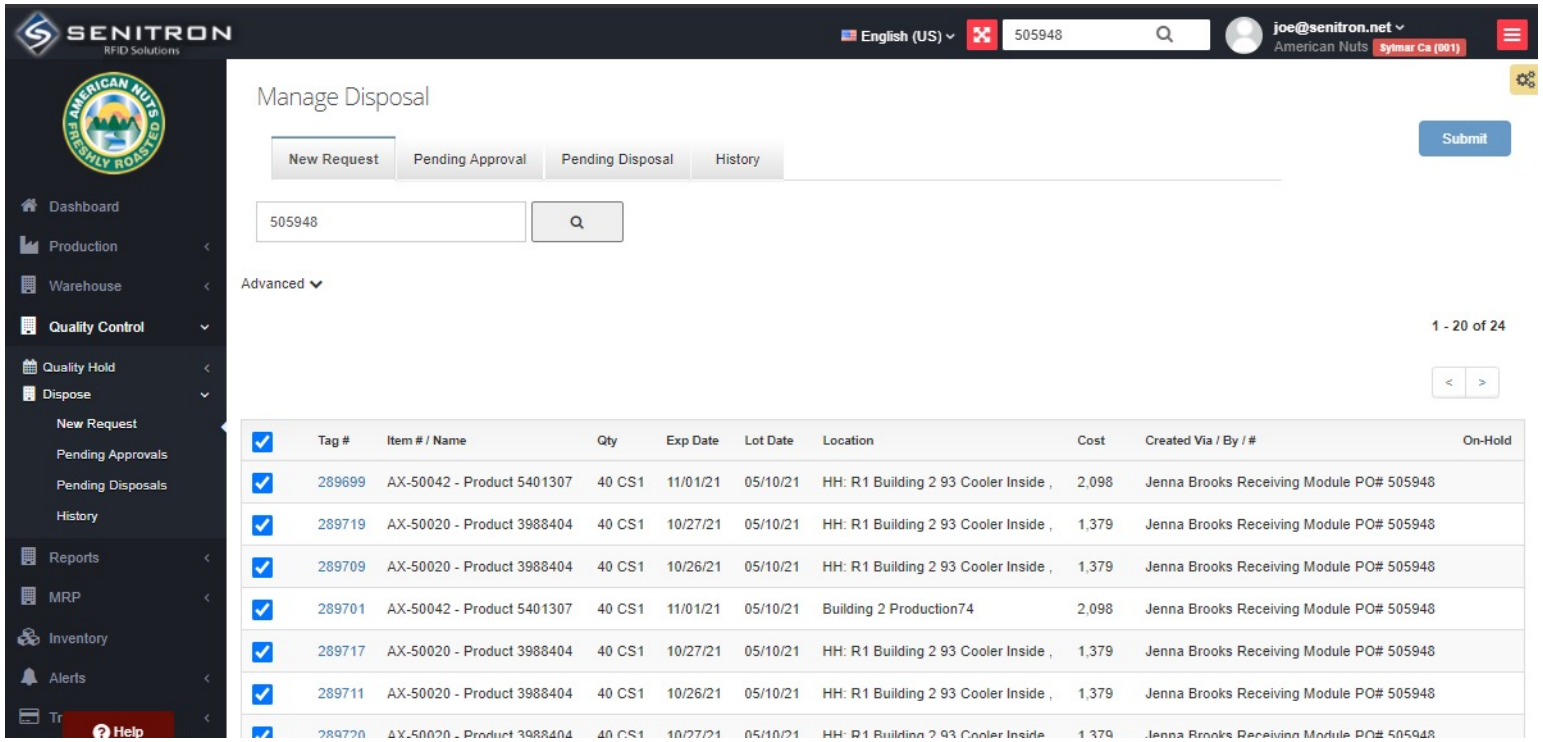
WMS MODULE: DISPOSALS

"Safeguard your assets with ERC electronic inventory disposal system"

Disposal Process:

- QA starts inventory destruction request (IDR) auto generating an internal destruction number
- QA employee prints and attaches IDR license plate
- Management approves or rejects disposal request





Auto Notified: Depending on the dollar value threshold, appropriate manager receives email for IDR approval or rejection.

Management Notified: QC management automatically receives email notifications showing IDR hold violations or if item is on hold for more than a set number of days.

Auto Blocked: Inventory in IDR status becomes unavailable for consumption and sales.

MANUFACTURING MODULE: PRODUCTION WO SCHEDULING

"Scheduling is a breeze with ERC user-friendly electronic scheduling system"

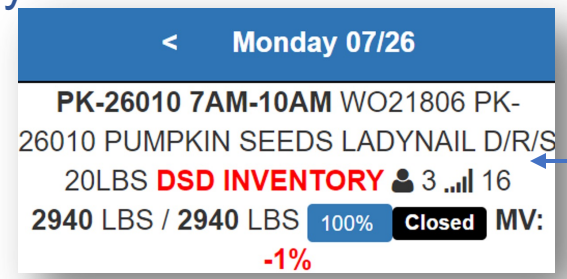
Scheduling Process:

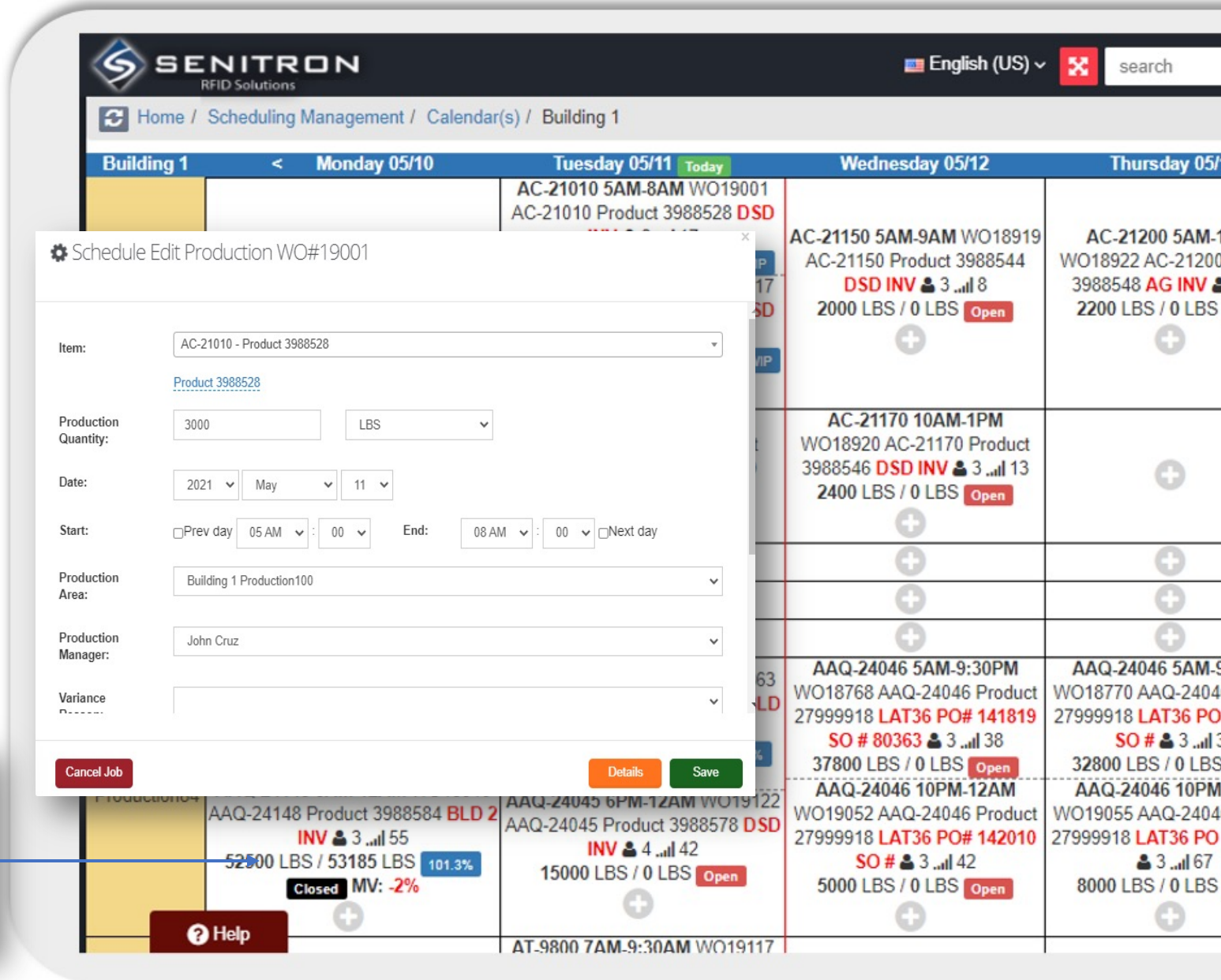
- Scheduler uses production calendar to view line utilization
- Scheduler schedules new production
- Scheduled production generates electronic wo number

REAL-TIME DATA

Display Summary

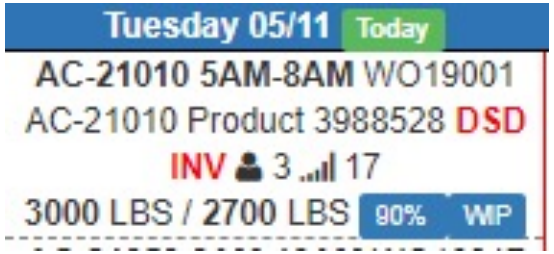
- Item produced
- Message & note display
- Qty produced vs goal
- Qty usage variance
- Electronic WO #
- Crew Size
- Std units per minute
- Real-time order status



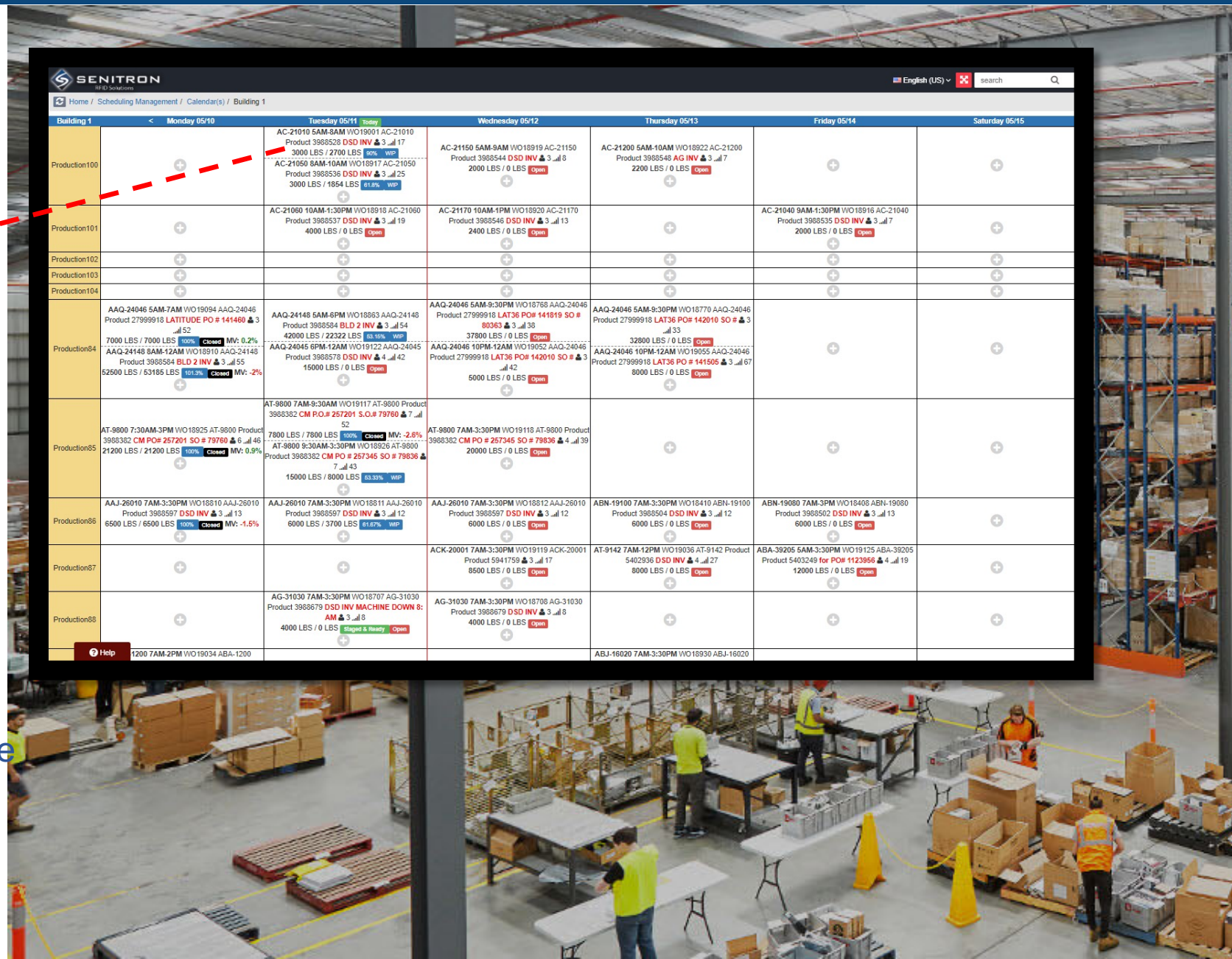


PRODUCTION MONITORING IN REAL-TIME

"Mounted displays show work order production progress & status in real-time"



- Real-time order status
- Actual quantity produced vs goal
- Set direct labor standard
- Usage variance qty/cost
- Schedule line maintenance / downtime
- Messages & Note display
- Monitor Shop Floor



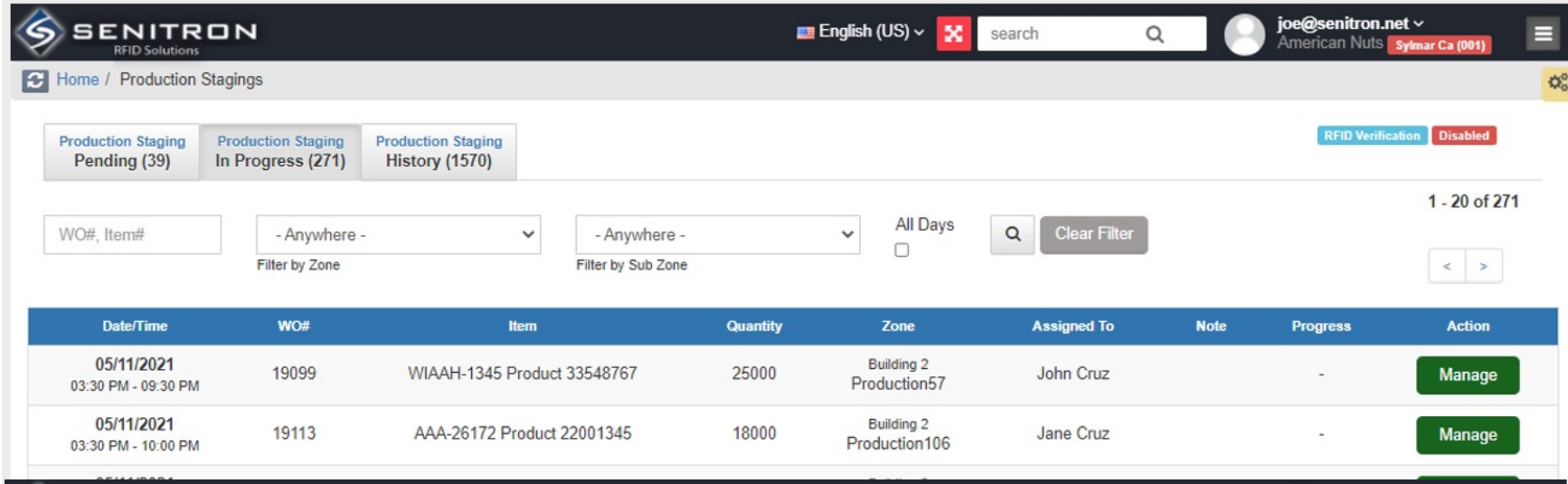
PRODUCTION MANAGEMENT WO: STAGING MANAGEMENT

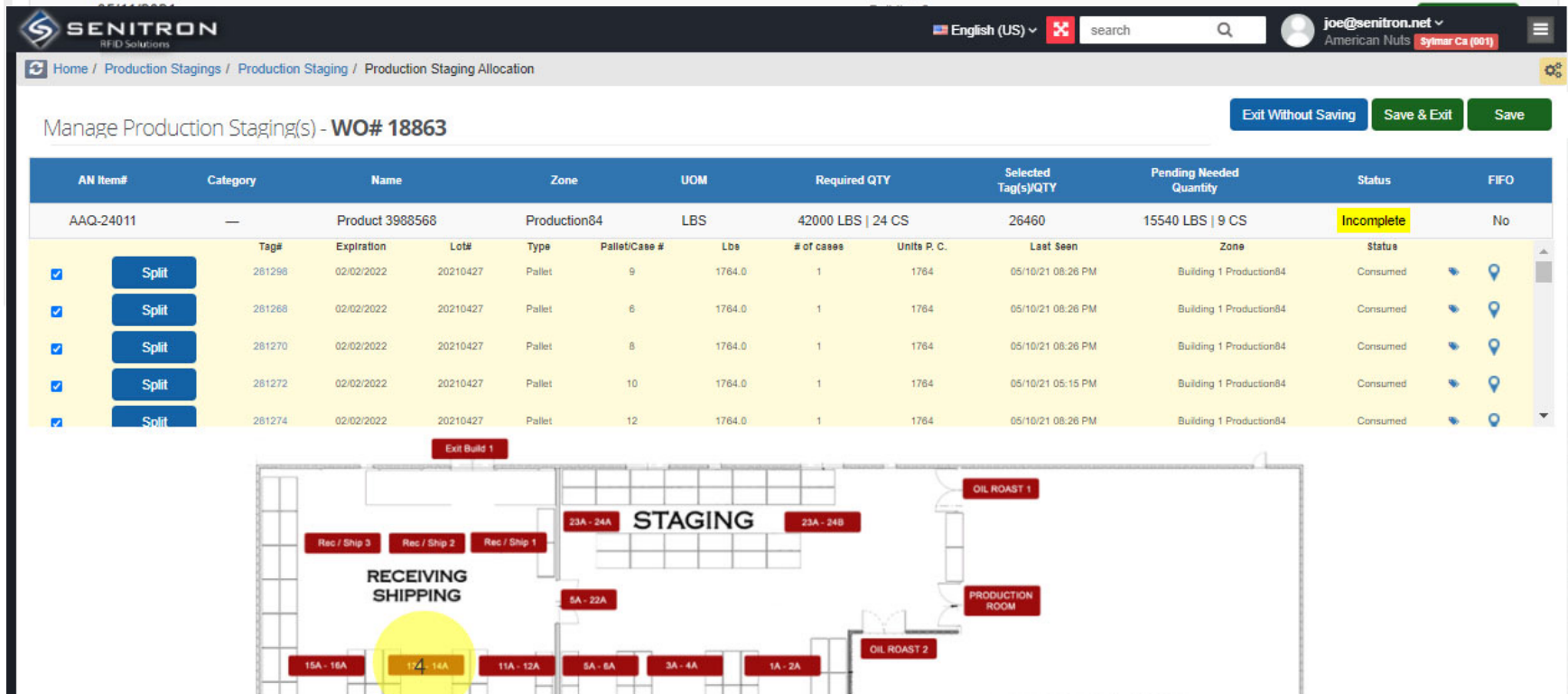
"ERC reduces expiration exposure with FIFO driven WO staging module"

WO Staging Process:

- Picker sees available items on the map sorted in FIFO order
- Picker selects tags transferred to staging area
- Picker splits tag if needed (creates new tag with same info as original but new qty)
- Picker confirms WO staging completion status

Management Notified: Management automatically receives email notifications if FIFO violations occur.



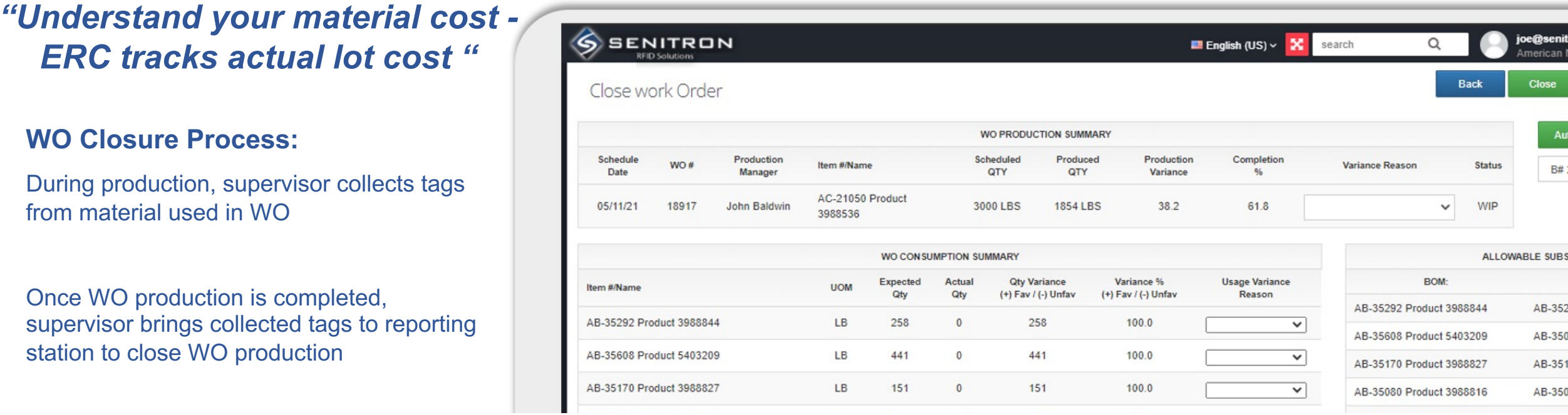


PRODUCTION MANAGEMENT: WORK-ORDER CLOSURES

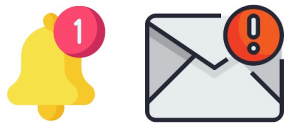
"Understand your material cost - ERC tracks actual lot cost "

WO Closure Process:

- During production, supervisor collects tags from material used in WO
- Once WO production is completed, supervisor brings collected tags to reporting station to close WO production



Management Notified: Management automatically receives email notifications if usage variance from BOM or allowable substitutions occurs.



Management Notified: Management automatically receives email notifications if material usage variance goes over an allowable percentage.

ERC Enterprise Resource Control
RFID for Manufacturing & Distribution

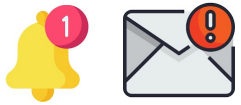
WHM MODULE: SALES ORDER FULLFILMENT

Powered By SENITRON RFID SOLUTIONS

"ERC reduces expiration exposure with FIFO driven SO staging module"

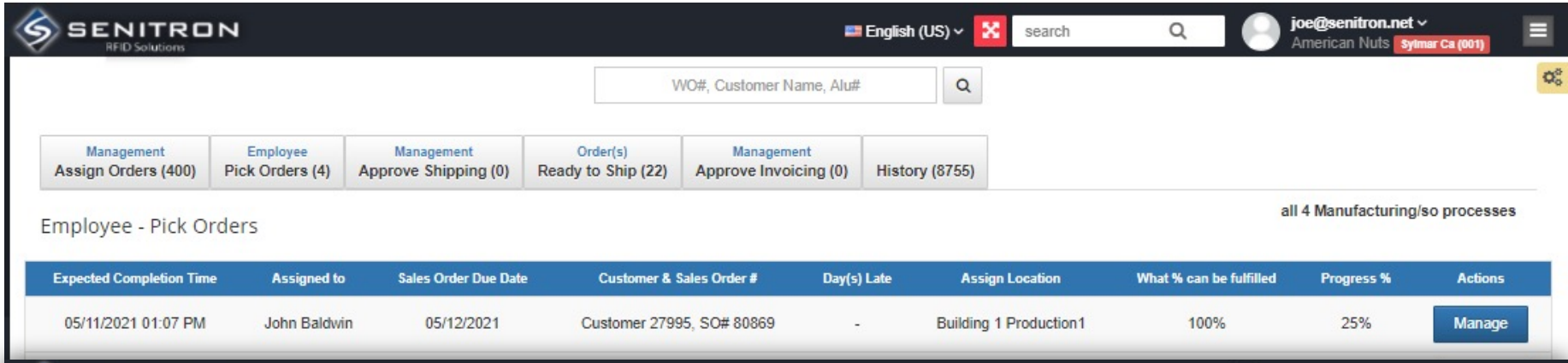
SO Staging Process:

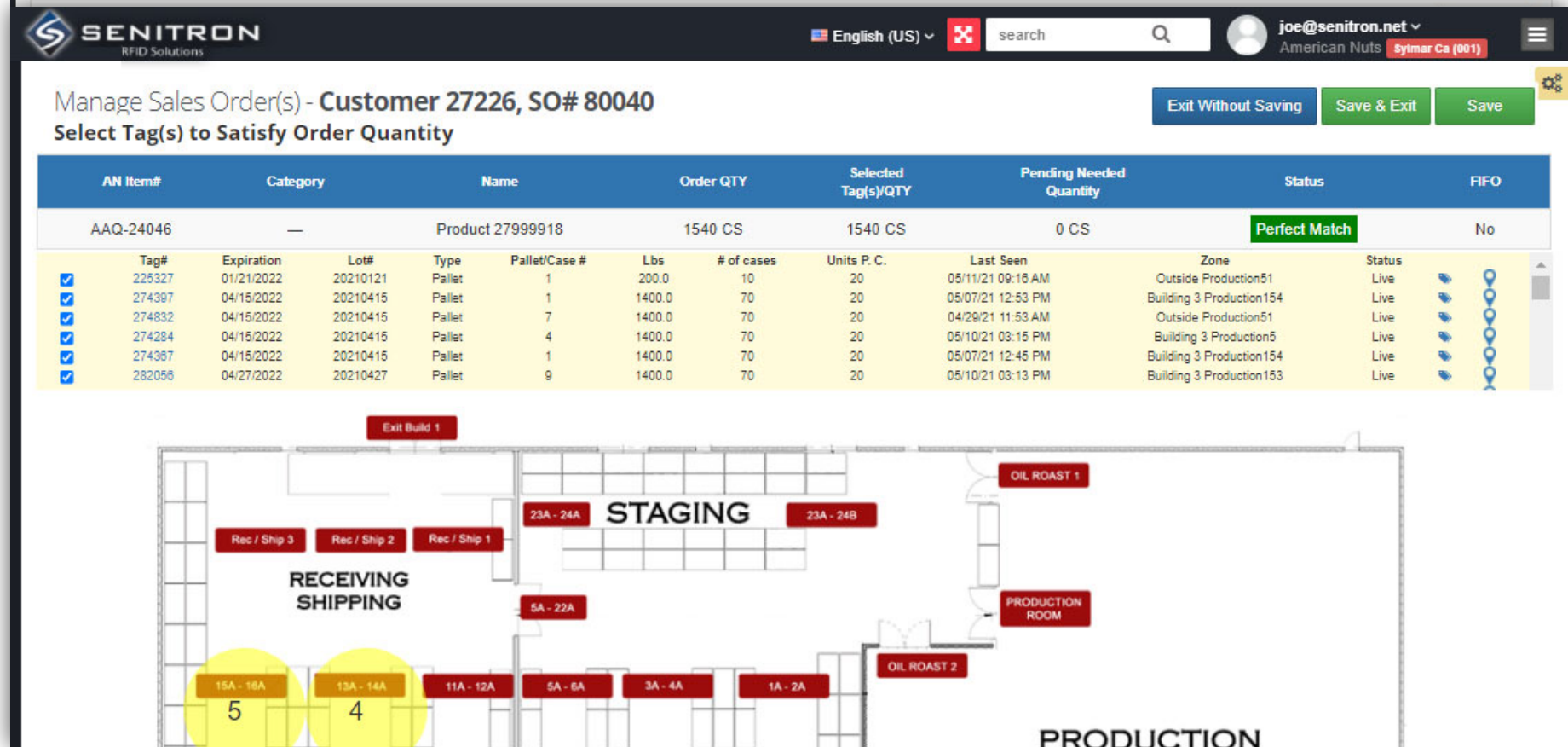
- Management decides how to assign sales order picking
- Pickers see available inventory in FIFO order
- Pickers virtually allocate tags to sales order
- Once picked and staged, supervisor inspects and approves shipping
- Quick-ship module can be used if management review is not required



Salesperson Notified: Salesperson automatically receives email notifications if order was short shipped.

Management Notified: Management automatically receives email notifications if FIFO violations occur.



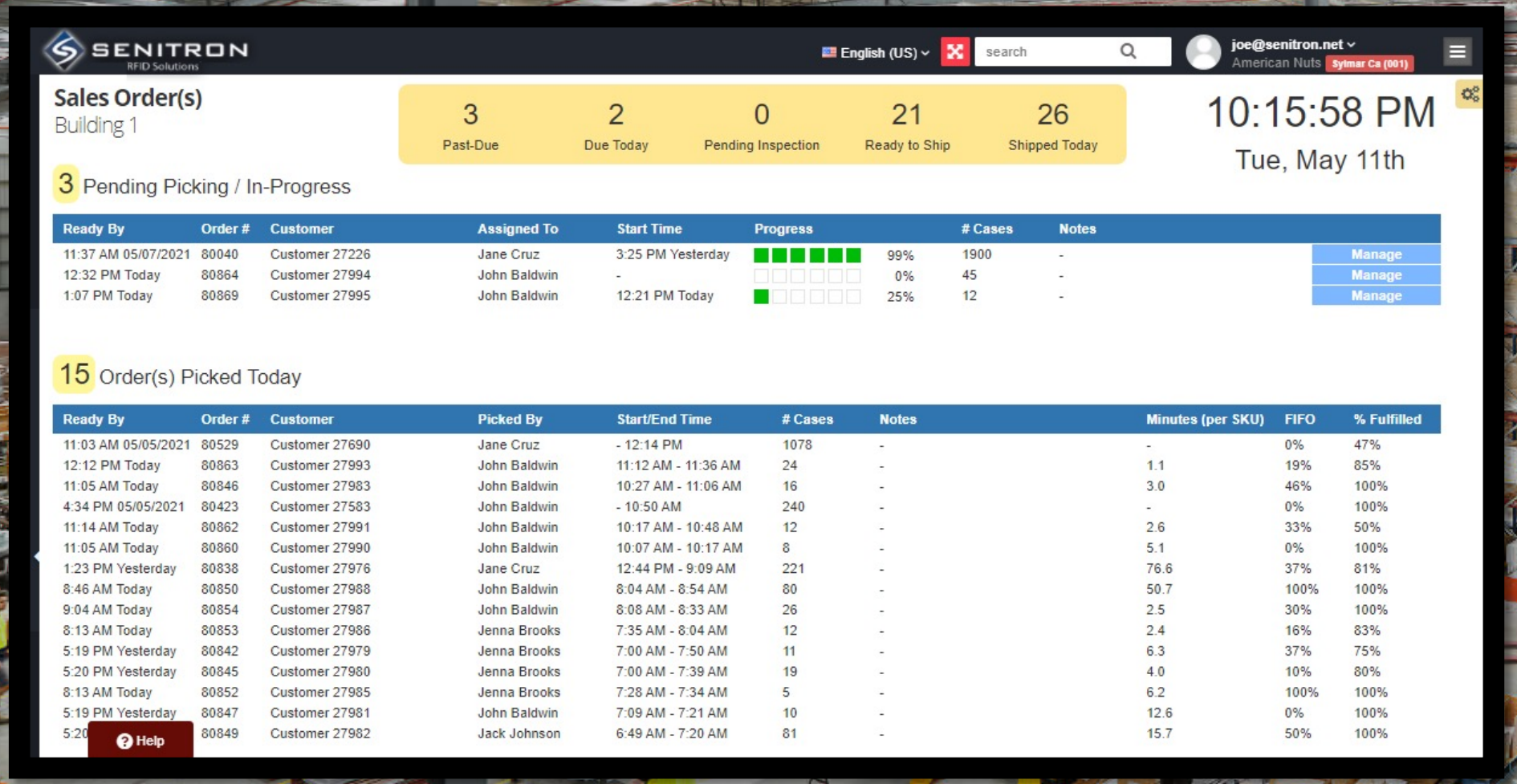


ERC Enterprise Resource Control
RFID for Manufacturing & Distribution

REAL-TIME SALES FULLFULMENT MONITORING

Powered By SENITRON RFID SOLUTIONS

Mounted Displays Show Sales Order Fulfillment activities In Real-time

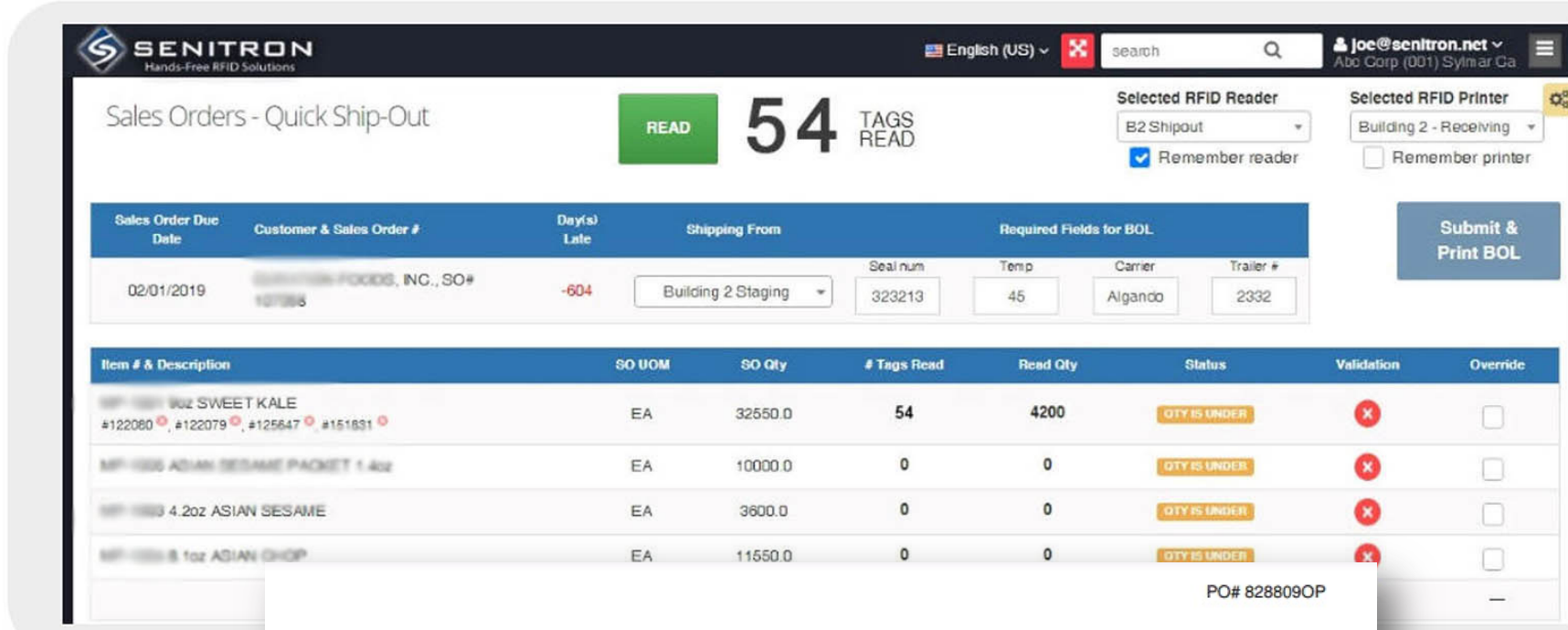


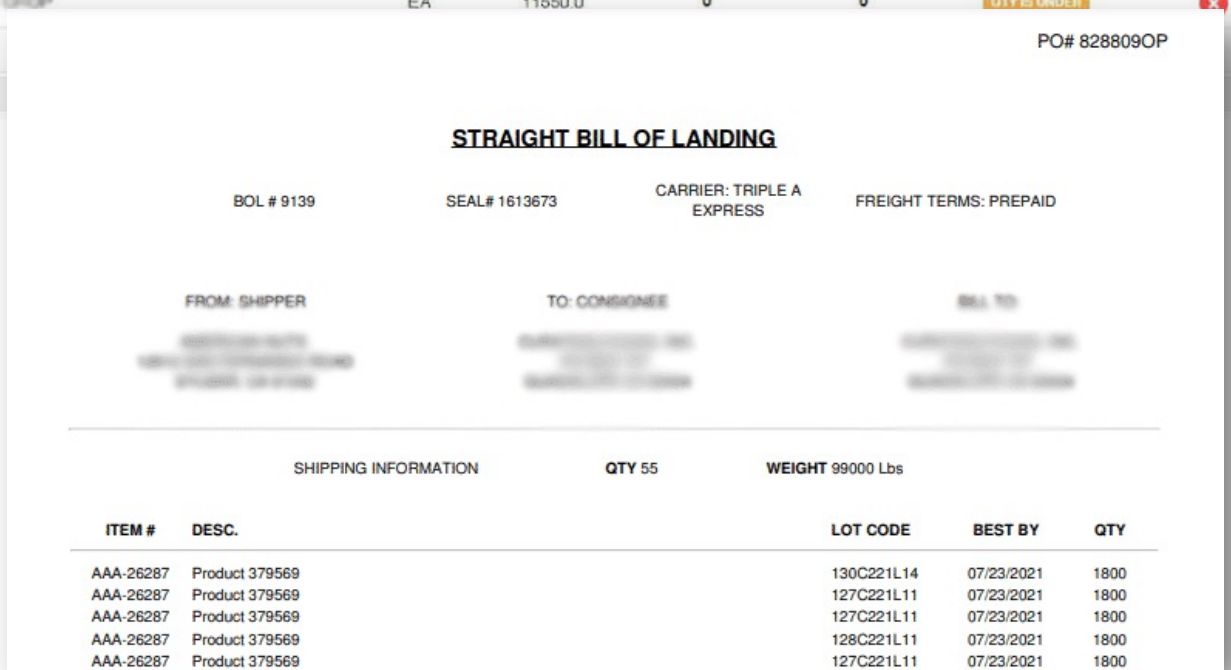
WHM MODULE : SALES ORDER FULLFILMENT QUICKSHIP

"ERC quick ship module reduces labor & time significantly"

Process

- Personnel may quickly load in a large number of pallets into the shipping trucks, via the dock.
- While fixed RFID readers are reading the loaded inventory and with a few click shipment is processed, and BOL is produced.





Option 1: As each pallet exits and get loaded into trucks on the loading docks.

Option 2: RFID labels can be read quickly under fixed wall-mounted RFID reader.

"Automatic Purchase Order Recommendations"

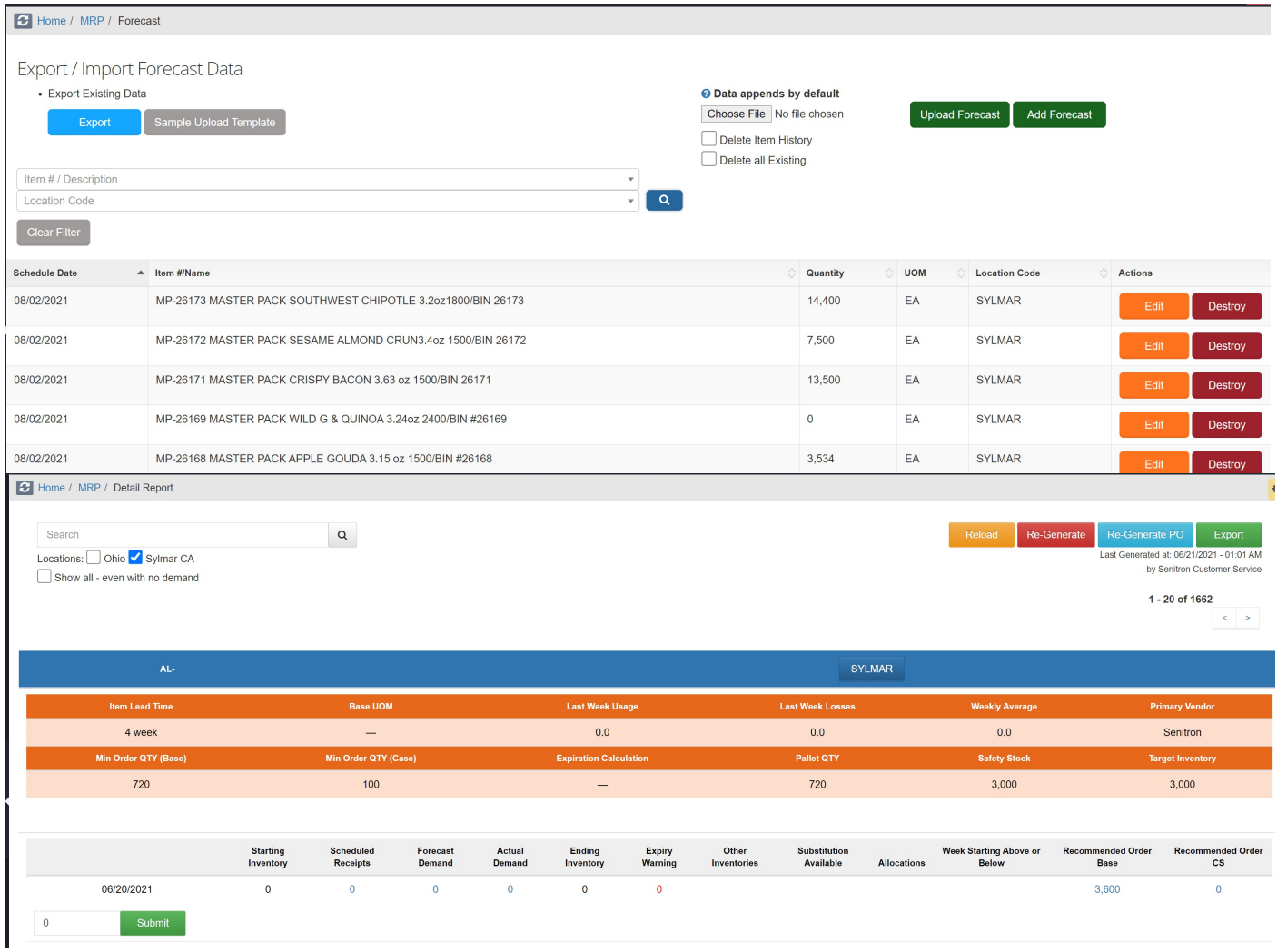
MRP Process:

- Planner uploads or manually enters future demand
- Buyer runs MRP detail report to see purchase recommendations (increase/decrease)

Demand Template:

Item_number	qty	uom	date	location_code
MP-1001	3150	ea	1/11/2021	OHIO
MP-1001	296,100	ea	1/11/2021	sylmar
MP-1000	132,000	ea	1/11/2021	OHIO
MP-1000	497,613	ea	1/11/2021	sylmar
MP-1007	14,400	ea	1/11/2021	OHIO

Management Notified: Purchaser automatically receives email notifications if purchase recommendation changed by set percentage.



THANK YOU

We welcome you to reach out with any questions or further information.

Senitron CTO Joe Saghezi and COO Nassim Bayat are also present at the show, and in the audience incase you need further information feel free to connect with them.

Nate Willits
American Nuts CFO
Direct Line: +1 (818) 364-8855
Email nate@americannuts.com

Joe Saghezi
Senitron CTO
Direct Line: +1 (818) 400-8275
Email joe@senitron.net

Nassim Bayat
Senitron COO
Direct Line: +1 (949) 257-7151
Email nassim@senitron.net

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