# SchedulePro New Features

# Table of Contents

# 1. Version 12.2 New Features

## 1.1. Automatic Attention Codes

Attention codes are user defined codes that indicate some condition in an operation. SchedulePro can automatically assign an attention code to scheduled operations that are delayed from their originally scheduled time.

Use the new **Automatic Attention Code** setting in an operation to apply this feature.

## 1.2. Attention Codes Visible in EOC

User-defined Attention Codes may now have a color in addition to a name and description.
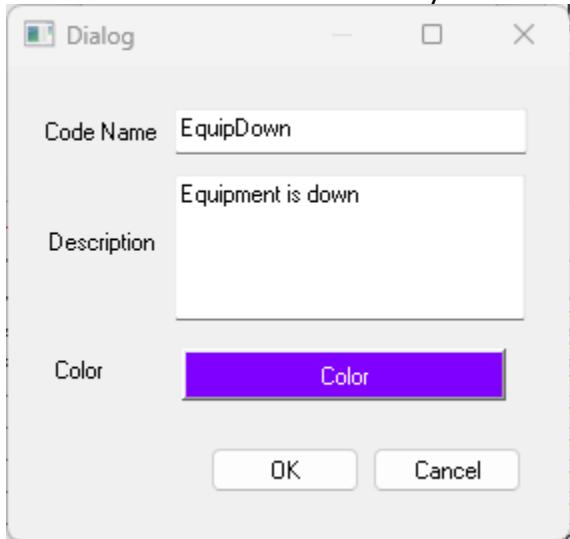


For operations with an attention code, the color will appear as the operation frame color in the EOC when the operation has the attention code and when the frame color option in the chart style settings is set to ATTENTION CODE.
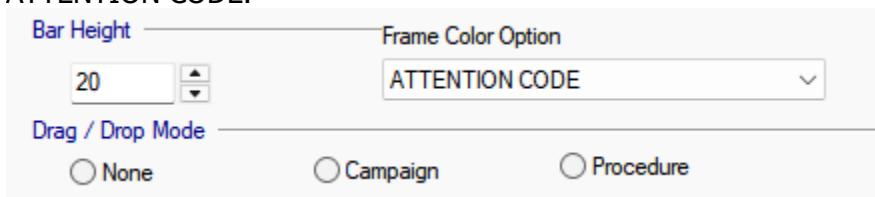


## 1.3. Export to SCP Cloud Planning (experimental) Application

Users testing the new SchedulePro Cloud Planning application may export a SchedulePro file to a text format (json) suitable for upload to SCP Cloud planning.

Contact Intelligen for more information.

## 1.4. Gantt Chart Descriptions Improved

The description field in the Gantt chart reflects the recipe description fields in the recipe Gantt chart and the operation comments for schedule Gantt chart.

# 2. Version12.1 New Features

## 2.1. Duration Amount from Equipment-Dependent Stream

A rate-based duration may take the amount from an equipment-dependent stream:
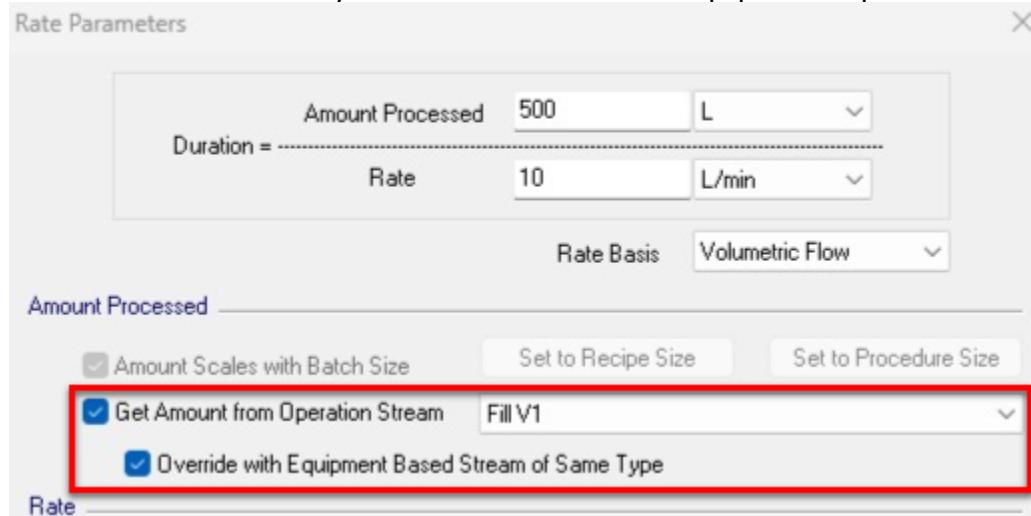


## 2.2. MS Access Database Report Includes Working Duration

The MDB Report (Connectivity/MDB Report), now includes both the total duration (including breaks) and the working duration for operations.

## 2.3. Delete Batch Onwards

The "Delete Batch Onwards" command from an operation will now delete all linked operations even if they are earlier.

## 2.4. Batch Delay Reporting

The batch delay analysis report in standard HTML format or in Excel displays the equipment resources that are linked to batch delays beyond the requested cycle time. This can help identify bottlenecks where there are multiple products or when equipment is reused among several procedures.
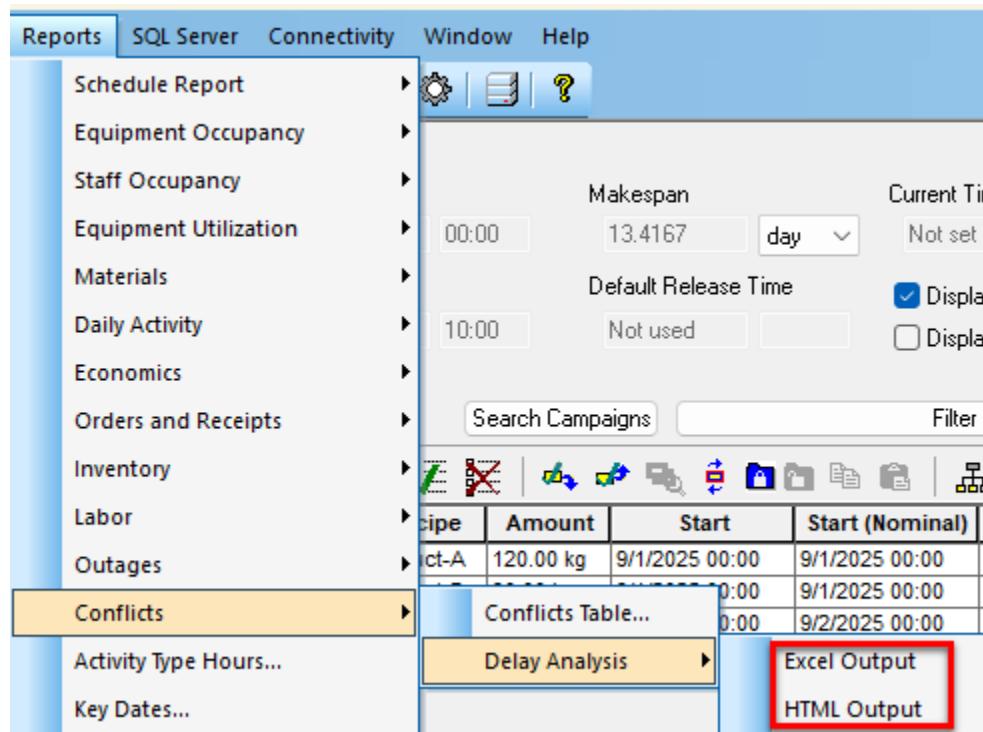
## 2.5. Editing Resources for Scheduled Campaigns

Pooled resources (equipment, staff and work areas) may be modified at the campaign level for scheduled campaigns. All batches in the campaign will get the selected resources.

## 2.6. COM Type Classification may be overridden at the Procedure Level

The COM classification for one category may be overridden at the procedure level. This may be useful in recipes that include the making of intermediate products.
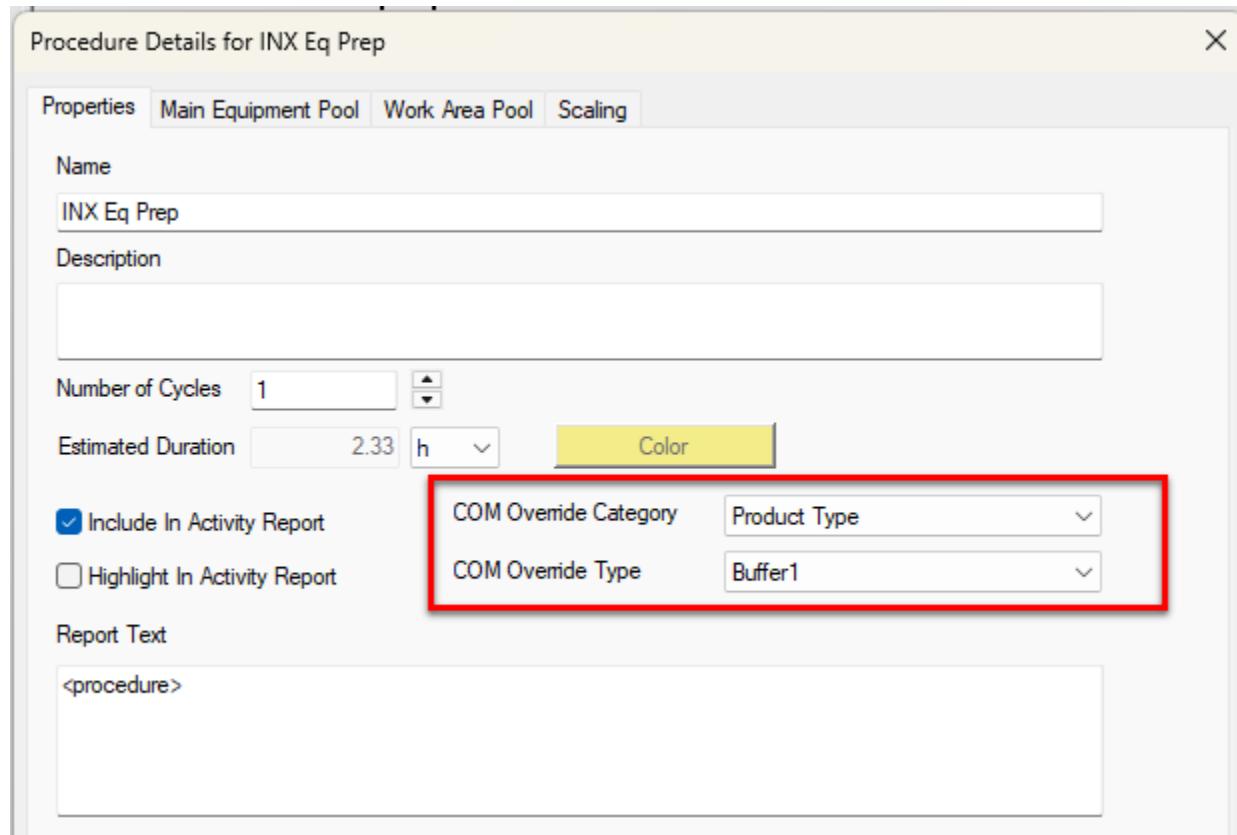
## 2.7. Conditional Operations - New Options

Conditional Operations now have the following new options:
- Usage count based on operation type -- the count will include only usages of the specified type.
- Execution based on change in Recipe/SKU COM type for a selected category.

## 2.8. Batches Have Ediable Local Names

Batches have an editable local name for display purposes. Internal an extra-reference links still use the Batch Id. Local names may be edited directly or imported from a text fille.

SchedulePro will keep the local names after rescheduling a campaign.

## 2.9. The Equipment Occupancy Chart Now Respects Time-Clipping

The Equipment Occupancy Chart can now use time clipping to focus on a particular time range.
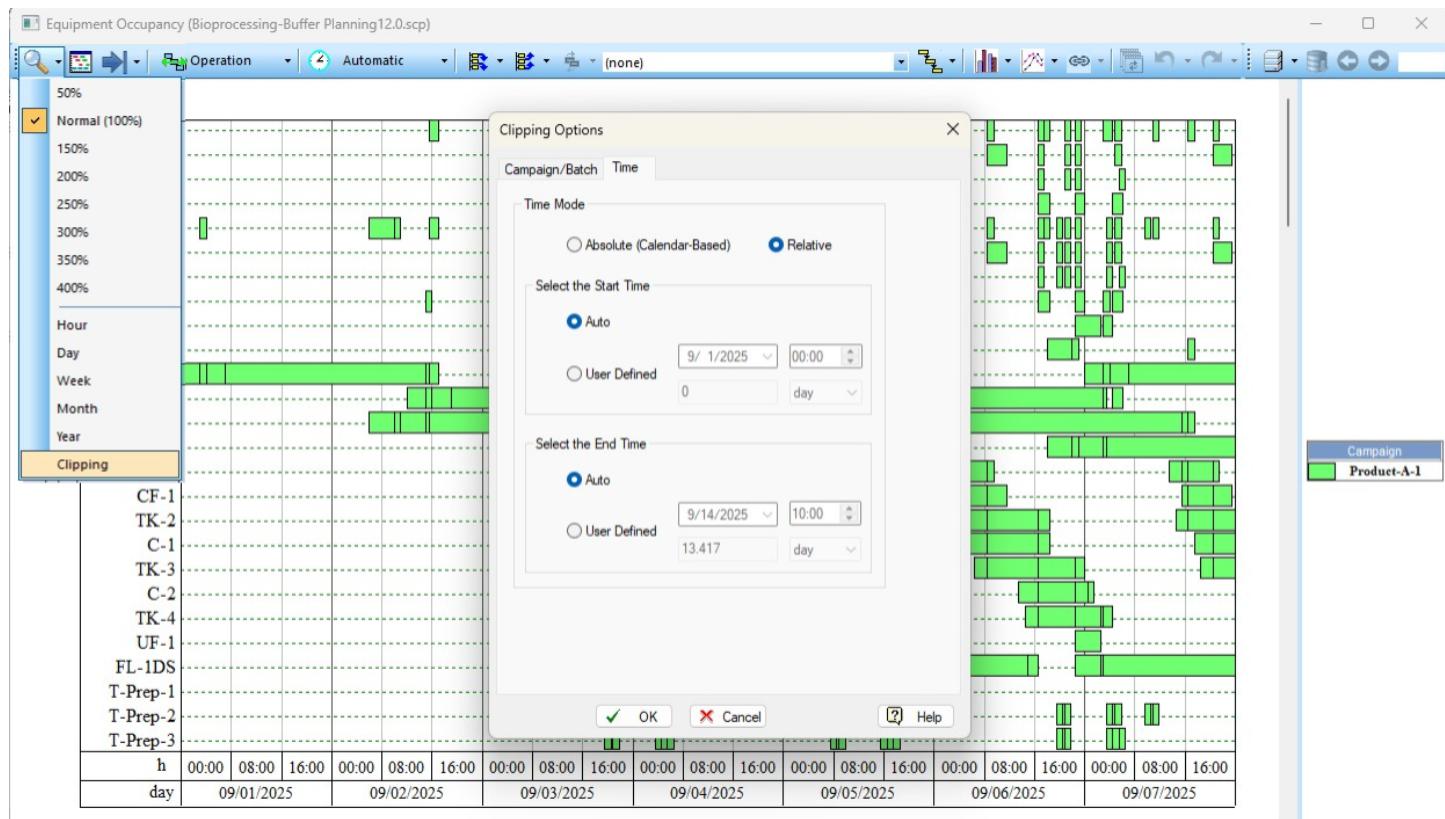
# 3. Version 12.0 New Features

## 3.1. Multi-Even Campaign Scheduling

Event based campaigns can be based on the earliest or latest of multiple inventory events.



Users may choose whether to use the latest or earliest of all the inventory events to trigger a campaign.

## 3.2. Menus Reorganized

The main menus have been reorganized and non-functional or obsolete options have been removed.

## 3.3. Workareas May Now Have Suites

Suites now apply to work area resources. They are restricted by suites in the same way that equipment are. This feature may be used to ensure that incompatible batches do not concurrently share suites.

## 3.4. Improved Cycle Time Estimat

The cycle-time for a recipe or campaign may be calculated by one of the following methods:
- The original gross estimate which simply estimates the procedure with the longest effective duration (duration divided by the number of available equipment units).
- Algorithmic which accounts for repeated equipment usage and (optionally) staff and auxiliary equipment.
- The Optimization method which is similar to the algorithmic method. The user may select the built-in (SCIP) optimization solver or if GAMS is available, one of the several solvers supported by GAMS.

When estimating the cycle time for a campaign, there is an option to "Take Results and Exit," which will apply the cycle time and any equipment assignments to the campaign.

## 3.5. Improved Staff Skill Assignment

A simple check-box interface replaces the former tool for assigning skills to staff.

## 3.6. Schedule Evaluation Includes Run Rate and Cycle Time

For SKU campaigns and recipes with a batch size, the run rate in units of product per year is now included.

## 3.7. Schedule to Due Date by Adding Batches

SchedulePro campaigns now have an option to add batches until the due date.
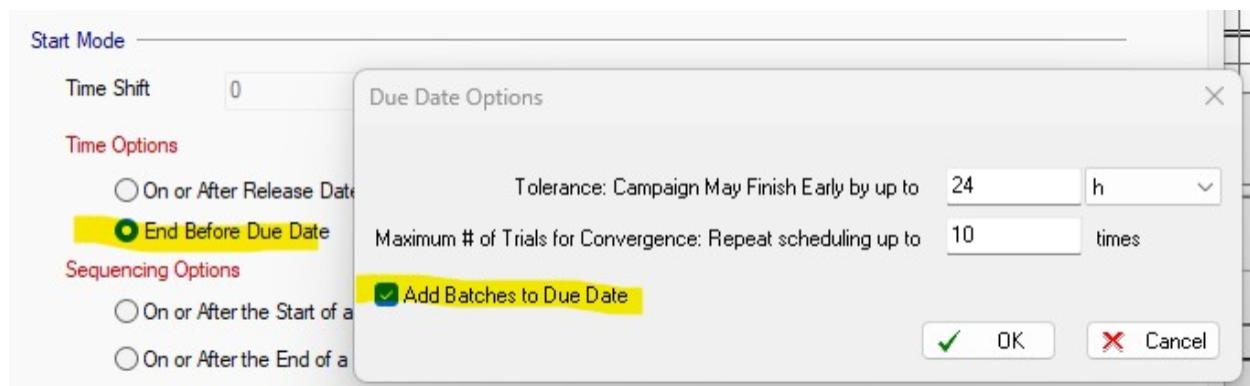


## 3.8. Recipe-Wide Editing Options

The recipe page includes new options for editing the following:
- Procedure equipment and work areas
- Operation auxiliary equipment
- Operation utilities
- Operation durations

Edit Pooled Resources for Procedures

Edit Pooled Resources for Operations

Edit Utility Requirements
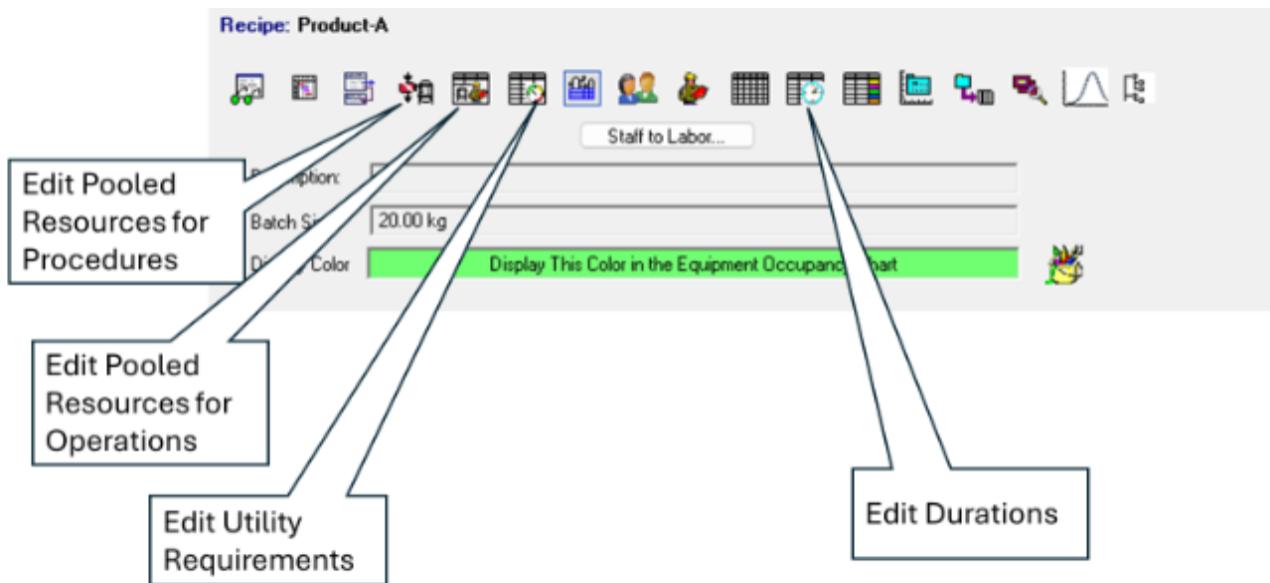
Edit Durations

# 3.9. Operation Durations Based on Fill/Empty Inventory Streams

The durations for rate-based operations may be calculated based on the amount in a stream that sets a final inventory. The amount will be calculated when the operation is scheduled. The duration is not automatically updated for later (lower priority) batches that might affect the inventory.





# 3.10. Report by Staff Option in Daily Activity Report

The daily activity report can now be displayed for selected staff. Staff may be filtered with Contents and

Ordering options.



## 3.11. Batch Color Option in Daily Activity Report

The Daily Activity Report now has a Use Batch Color option. Entries will be shown in the same batch color that is displayed in the Equipment Occupancy Chart. This option is exclusive with the Operation Colors option. If no option is chosen, shift colors are used.



## 3.12. Change from Baseline Reporting in Schedule Report

If the Track Changes option is activated, changes from the baseline may be reflected in the Schedule report. The new (current) values are shown in color while the prior values remain in black.

**Campaign: Product-A-1, Recipe: Product-A, Duration: 13.188 day**

| Batch | Procedure | Operation | Phase ID | Phase Entry ID | Start | End | Prev Start | Prev End |
|---|---|---|---|---|---|---|---|---|
| Product-A-1-3 | Seed Fermentation | Set Up | | | Thursday 9/19/2024 02:40 | Thursday 9/19/2024 05:40 | Thursday 9/19/2024 00:00 | Thursday 9/19/2024 |
| Product-A-1-3 | Seed Fermentation | Charge Media | | | Thursday 9/19/2024 05:40 | Thursday 9/19/2024 06:40 | Thursday 9/19/2024 03:00 | Thursday 9/19/2024 |
| Product-A-1-3 | Seed Fermentation | Sterilize Media | | | Thursday 9/19/2024 06:40 | Thursday 9/19/2024 09:40 | Thursday 9/19/2024 04:00 | Thursday 9/19/2024 |

## 3.13. Staff May be Emailed Change Notifications Based on Changes from Baseline

There is a new option to email change notifications. This feature works with the staff email address property and with the change tracking features. Staff who are assigned to or de-assigned from an operation that has changed from its last baseline will be sent notifications. These emails are sent on-demand. The VCalendar

email feature now uses the SMTP email settings which are found under SQL Server Settings or Reports/Change Notifications/Email Notification Options.
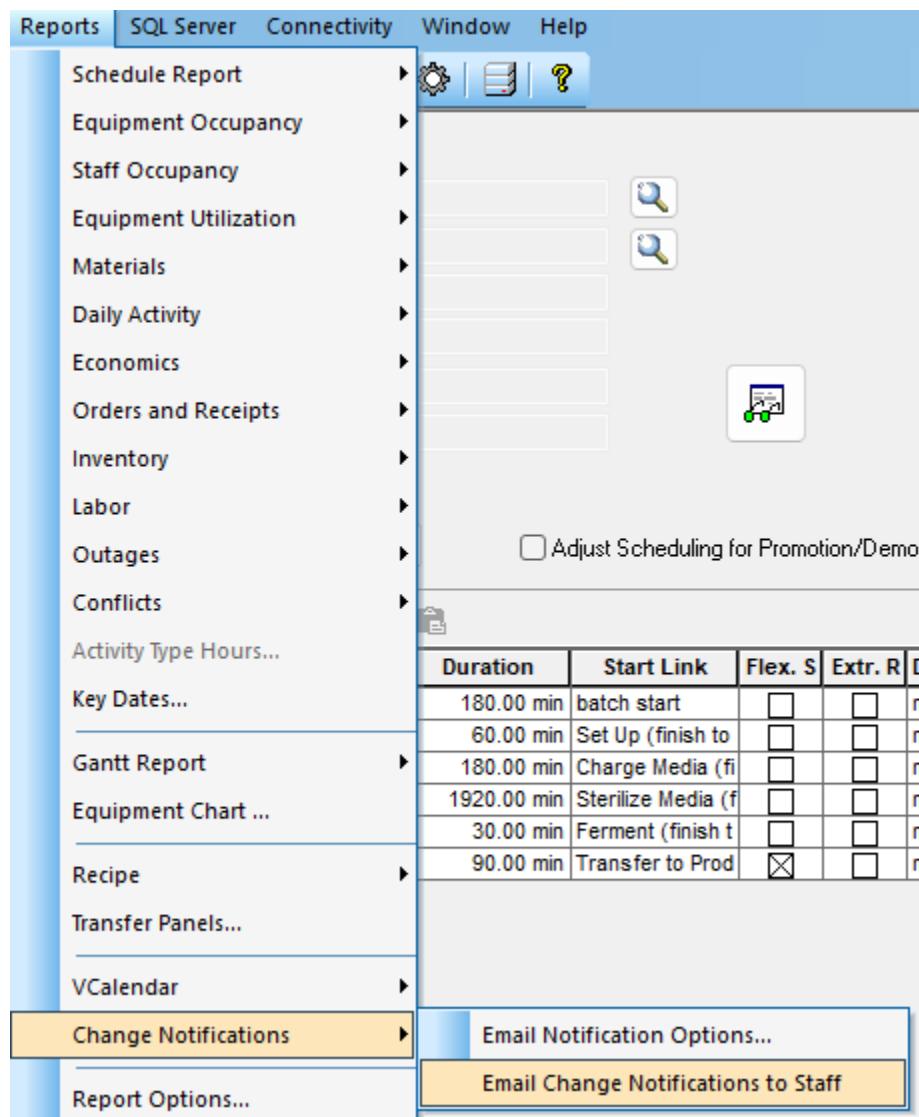


## 3.14. Inventory Report Single Table Option

The inventory report now has options to display as a single table as well as an option to exclude the storage unit totals.
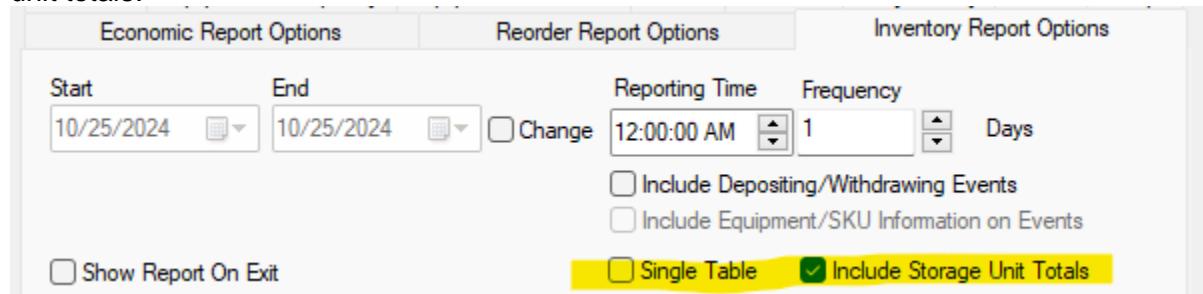


## 3.15. New Fields Included in the Excel Report

The Excel Report contains the operation data specified in the Schedule Report options. The fields now include:
- Campaign

- Recipe

- Batch

- Procedure

- Operation

- Start/End

- Main Equipment

- Comments

- Auxiliary Equipment

- Staff

- Labor