

REAL-TIME PERFORMANCE MANAGEMENT FOR THE ENTERPRISE

RtPM



REAL-TIME PERFORMANCE MANAGEMENT FOR THE ENTERPRISE

RtPM



Product Data Management Made Easy Using ProcessPoint

Ray Hall

Outline

- Product Data Management
- What is ProcessPoint
- Business Example: Dow Reichhold
- RtPM Integration
- Summary



Product Data Management , also known as:

Product Lifecycle Management

Recipe Management

Product & Process Specification

Batch Specification

Grade Management

Limit, Target Management (PI)



Product Data Management Challenge

- Product quality and consistency, and process efficiencies, depend on managing lots of data
 - Formulations, Recipes, Bills of material
 - Quality, Packaging, Nutritional, Regulatory specifications
 - Manufacturing process steps and instructions
 - Process Targets, Limits
 - Tag Specifications
 - Limits
 - Targets



Data Management often involves workflow:

Product

Design

Lab

Pilot

Produce

Improve

Process



Typical Project Goals

- **Enhanced product quality**
- **Reduced product cost**
- **Quicker time to market**
- **Find the right specification**
- **Process Optimization**
- **Product consistent to customer spec**
- **Systematized regulatory compliance**
- **Manufacturability**



The advantage of consolidated specification information:



What systems have our:

- Specifications?
- Recipes?
- Control limits?
- Product attributes?
- Process targets?
- Process documentation?
- SOPs?

The Power of a packaged System for Specifications

processPoint PDM Editor - [11133346.Global (Acetone)] - D:\Documents and Settings\tschuryk.OSI\Desktop\Demo Files for Generic Demo\acet

File Edit View Search Tools Help

Solvents - Properties

Items

- Misc Chemicals
- Products
- Solvents
 - 11133346.Global
 - 11133347.Global
 - 1239800.Global
 - 3332321.Global
- Assets
- Library
 - Actions
 - Approval Plans
 - Attributes
 - Item Classes
 - Pick Lists
 - Units of Measure

| | | | |
|---|--------------------------|-------------------------------------|---------|
| ACME Corporation | | Chemical Processing Division | |
| Material Specification Sheet : Acetone | | Solvents | |
| ID:11133346 | | Modification Date:9/19/2002 | |
| Version:0 | | Issue Date: | |
| Description: Acetone is the simplest and most important of the ketones. It is a colorless liquid with a mildly aromatic odor. It is primarily used as a chemical intermediate, a solvent, a carrier for acetylene, and as a raw material for chemical synthesis. | | | |
| Formula: | CH3COCH3 | | |
| Boiling Point: | 56.2 deg C | Molecular Weight: | 65 |
| Freezing Point: | -142.0 deg C | Viscosity: | 1.3 cP |
| Melting Point: | -94.3 deg C | Kinematic Viscosity at 20C: | cP |
| Flash Point: | -20.0 deg C | Kinematic Viscosity at 40C: | cP |
| pH: | | Refractive Index: | 1.359 |
| Odor: | fragrant, mint-like odor | Upper Explosive Limit (%vol): | 12.80 % |
| Density: | 0.7857 g/cm3 | Lower Explosive Limit (%vol): | 2.60 % |
| CAS RN: 67-64-1 | | Fire Hazard Rating: 5 | |
| DOT Number: UN 1090 | | Health Hazard Rating: 3 | |
| DOT Label: Flammable Liquid | | | |
| Storage and Handling: | | | |
| Protective Eye Equip: | | Safety glasses with side shields | |
| Protective Respiratory Equip: | | Air supplied respirator | |

The Power of a packaged System for Specifications

processPoint PDM Editor - [11133346.Global (Acetone)] - D:\Documents and Settings\tschuryk.OSI\Desktop\Demo Files for Generic Demo\acet

File Edit View Search Tools Help

Solvents - Properties

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 - Pick Lists
 - Units of Measure

Up-to date

Approved

Organized and Displayed the way I want

Comprehensive

Integrated into PI

ACME Corporation Chemical Processing Division

Material Specification Sheet : Acetone Solvents

ID: 11133346
Version: 0

Modification Date: 9/19/2002
Issue Date:

Description: Acetone is the simplest and most important of the ketones. It is a colorless liquid with a mildly aromatic odor. It is primarily used as a chemical intermediate, a solvent, a carrier for acetylene, and as a raw material for chemical synthesis.

Formula: CH3COCH3
Boiling Point: 56.2 deg C
Freezing Point: -142.0 deg C
Melting Point: -94.3 deg C
Flash Point: -20.0 deg C
pH:
Odor: fragrant, mint-like odor
Density: 0.7857 g/cm3

Molecular Weight: 65
Viscosity: 1.3 cP
Kinematic Viscosity at 20C: cP
Kinematic Viscosity at 40C: cP
Refractive Index: 1.359
Upper Explosive Limit (%vol): 12.80 %
Lower Explosive Limit (%vol): 2.60 %

CAS RN: 67-64-1
DOT Number: UN 1090
DOT Label: Flammable Liquid

Fire Hazard Rating: 5
Health Hazard Rating: 3

Storage and Handling:
Protective Eye Equip: Safety glasses with side shields
Protective Respiratory Equip: Air supplied respirator

processPoint PDM Editor - [11133346.Global (Acetone)] - D:\Documents and Settings\tschuryk.OSI\Desktop\Demo Files for Generic Demo\acet

File Edit View Search Tools Help

Solvents - Properties

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Molecular Weight: 65
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Kinematic Viscosity at 20C: cP
Kinematic Viscosity at 40C: cP
Refractive Index: 1.359
Upper Explosive Limit (%vol): 12.80 %
Lower Explosive Limit (%vol): 2.60 %

CAS RN: 67-64-1
DOT Number: UN 1090
DOT Label: Flammable Liquid

Fire Hazard Rating: 5
Health Hazard Rating: 3

Storage and Handling:
Protective Eye Equip: Safety glasses with side shields
Protective Respiratory Equip: Air supplied respirator

Product Data Management Benefits

- Increase product quality
 - Consistent product specifications across manufacturing sites
 - Visibility of specification data on real-time displays, product based alarming
- Increase product consistency through one version of the truth
 - R&D Centers, Manufacturing Sites, Marketing and Sales all access the same set of product specifications
- Improve employee efficiency
 - Spend more time developing products and less time managing the process
- Increase revenue
 - Decrease time to market for new products and updates to existing products





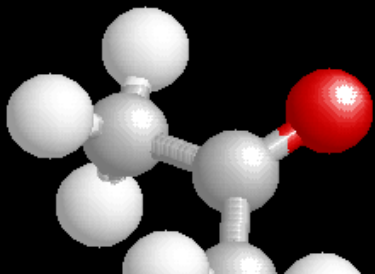
What is ProcessPoint

Introducing ProcessPoint

- Comprehensive product specification database
- A structured environment for development and ongoing management of products
- System of record for pre-process information
 - Product properties
 - Quality limits
 - Product parts
 - Manufacturing procedures
 - Product history
 - Approval and electronic signoffs



ProcessPoint: Specification Management



Edit Item - [11133346.Global (Acetone)]

General | Properties | Attributes | Other Information | Image | Related Documents | Audit Trail | Verification Results | Referenced By

Attributes allows you to edit item attributes.

| | Valid | Name | Data Type | Value | Pick List | Formula | Basis | Required |
|---|-------|----------------|-----------|-----------------|-----------|---------|-------|--------------------------|
| 1 | | Boiling Point | Real | 56.2000 deg C | | | | <input type="checkbox"/> |
| 2 | | Freezing Point | Real | -142.0000 deg C | | | | <input type="checkbox"/> |
| 3 | | Density | Real | 0.7857 g/cm3 | | | | <input type="checkbox"/> |

Edit Item - [11133346.Global (Acetone)]

General | Properties | Attributes | Other Information | Image | Related Documents | Audit Trail | Verification Results | Referenced By

Identity

ID 11133346

Variant Global

Version 0 Status Developmental

Alternate ID

Name Acetone

Description Acetone is the simplest and most important of the ketones. It is a colorless liquid with a mildly aromatic odor. It is primarily used as a chemical intermediate, a solvent, a carrier for acetylene,

Parent 11133345.Global (Toluene)

Class Solvents

Data Group QA Assets

Dates

Effective Date 10/18/2002

Expiration Date 10/18/2002

Item Type

☐ Solid

☒ Liquid

☐ Gas

☐ Part

Item UOM Kilograms

Options ▶

Cancel Help

OK Cancel Help

Configurable Data Model

- Users define the attributes or specs that are important to their business
 - i.e. Product Properties, Process Parameters, Quality Parameters, Environmental and Safety Information, Cleaning Requirements

Item: DL10011849.Global.0

File View Tools Attributes Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

| Valid | Name | Value | UOM |
|-------|-----------------------------------|----------------|----------------------------|
| 1 | CAS RN | 240-12-35 | |
| 2 | Appearance | Golden Liquid | |
| 3 | Formula | C20H25N3O | |
| 4 | Purity - Min QA Spec | 97.5000 % | Percent |
| 5 | Purity - QA Spec | 98.0000 % | Percent |
| 6 | Purity - Max QA Spec | 100.0000 % | Percent |
| 7 | Molecular Weight - Min QA Spec | 210.0000 other | Other |
| 8 | Molecular Weight - QA Spec | 230.0000 other | Other |
| 9 | Molecular Weight - Max QA Spec | 250.0000 other | Other |
| 10 | Density - Min QA Spec | 1.2000 g/cm3 | Grams per Cubic Centimeter |
| 11 | Density - QA spec | 1.2500 g/cm3 | Grams per Cubic Centimeter |
| 12 | Density - Max QA Spec | 1.3000 g/cm3 | Grams per Cubic Centimeter |
| 13 | Catalyst A Residual - Min QA Spec | 0.0000 % | Percent |
| 14 | Catalyst A Residual - QA Spec | 1.5000 % | Percent |
| 15 | Catalyst A Residual - Max QA Spec | 3.0000 % | Percent |
| 16 | Catalyst B Residual - Min QA Spec | 0.0000 % | Percent |
| 17 | Catalyst B Residual - QA Spec | 0.7500 % | Percent |
| 18 | Catalyst B Residual - Max QA Spec | 1.5000 % | Percent |
| 19 | Viscosity - Min QA Spec | 0.1000 Pa*s | Pascal-Seconds |
| 20 | Viscosity - QA Spec | 0.1500 Pa*s | Pascal-Seconds |

Ready

Item: DL10011849.Global.0

File View Tools Attributes Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

| Valid | Name | Value | UOM |
|-------|---|-----------------------|----------------------------|
| 37 | Autoignition Temperature | | Fahrenheit |
| 38 | Boiling Point | | Fahrenheit |
| 39 | UFL at 100 deg C | 0.0000 % | Percent |
| 40 | ACX Number | | |
| 41 | LFL at 100 deg C | 0.0000 % | Percent |
| 42 | Density | | Grams per Cubic Centimeter |
| 43 | Adjusted Density | | Grams per Cubic Centimeter |
| 44 | Training - BMN Grignard Reaction | Required | |
| 45 | Training - High Pressure Vessel Certifi | Recommended | |
| 46 | Training - Handling Oxidizing Materials | Required | |
| 47 | Training - Safe Lifting Procedures | Recommended | |
| 48 | Training - Confined Space Entry | Not Required | |
| 49 | Solubility in Water | 12.0000 % | Percent |
| 50 | Cleaning - Pre Production | Follow Procedure in S | |
| 51 | Cleaning - Post Production | Follow Procedure in S | |
| 52 | Vapor Pressure at 25C | | Millimeters of Mercury |
| 53 | Vapor Density | | Other |
| 54 | pH | 0.0000 other | Other |
| 55 | DOT Comments | | |

Bill of Material

Item: 99999.Lab.0

File View Tools BOM Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Template General Attributes **Bill of Materials** Procedure Stage Details Approvals Other Information Verification Related Documents Image Audit Trail Referenced BOMs

Batch Size 223.2000 lb / Primary Product % 100.0000% = Total Weight 223.2000 lb

Output Totals:

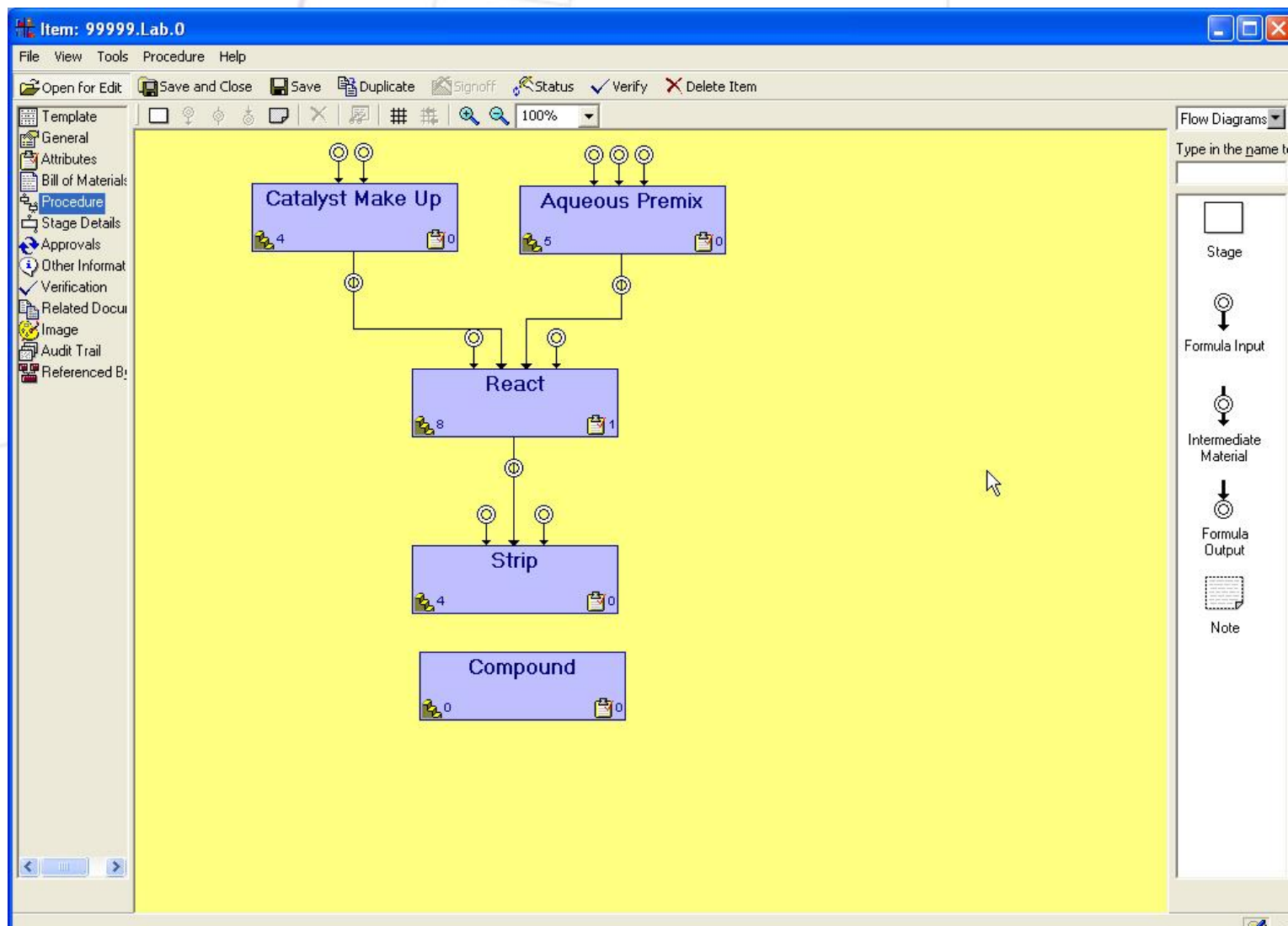
| | Name | Item | Descriptive Name | Type | Product Type | Formula Ratio | Allocated % | Formula Amount | Procedure Amount | Apply |
|--------|-------|-----------|------------------|--------|-----------------|---------------|-------------|----------------|------------------|-------|
| 1 | 99999 | 99999.Lab | Example | Liquid | Primary Product | 100.0000% | 0.0000% | 223.2000 lb | 0.0000 lb | |
| TOTALS | | | | | | 100.0000% | | 223.2000 lb | 0.0000 lb | |

Input Totals:

| | Name | Type | Activity | Formula Ratio | Allocated % | Formula Amount | Procedure Amount | Ingredient Type |
|----|----------------------|--------|-----------|---------------|-------------|----------------|------------------|---------------------|
| 1 | Butadiene | Liquid | 100.0000% | 50.0000% | 50.0000% | 49.9106 lb | 49.9106 lb | Key Ingredient |
| 2 | Styrene | Liquid | 100.0000% | 48.0000% | 48.0000% | 47.9141 lb | 47.9141 lb | Key Ingredient |
| 3 | Acrylic Acid | Liquid | 100.0000% | 2.0000% | 2.0000% | 1.9964 lb | 1.9964 lb | Key Ingredient |
| 4 | Water | Liquid | | 110.0000% | 120.0000% | 105.4214 lb | 115.0052 lb | Inactive Ingredient |
| 5 | Dowfax 2A1 | Liquid | 45.0000% | 2.5000% | 2.5000% | 5.5456 lb | 5.5456 lb | Ingredient |
| 6 | DEE FO 97-3A | Liquid | 100.0000% | 0.1000% | 0.1000% | 0.0998 lb | 0.0998 lb | Ingredient |
| 7 | Ammonium Hydroxide | Liquid | 28.0000% | 0.4000% | 0.4000% | 1.4260 lb | 1.4260 lb | Ingredient |
| 8 | Potassium Persulfate | Solid | 100.0000% | 0.1000% | 0.1000% | 0.0998 lb | 0.0998 lb | Ingredient |
| 9 | Dowfax 2A1 1 | Liquid | 45.0000% | 0.2500% | 0.0000% | 0.5546 lb | 0.0000 lb | Ingredient |
| 10 | Dowicide A | Solid | 100.0000% | 0.2500% | 0.0000% | 0.2496 lb | 0.0000 lb | Ingredient |
| 11 | Water 1 | Liquid | 100.0000% | 10.0000% | 0.0000% | 9.9821 lb | 0.0000 lb | Ingredient |
| | | | 46.3327% | 223.6000% | | 223.2000 lb | 221.9975 lb | |
| | | | | 100.0000% | | 99.8211 lb | 99.8211 lb | |
| | | | | | | | 1.2025 lb | |

Ready

Procedure



Procedure – Stage Details

| Stage: React | | | | | | | | |
|--|-------|------|---------------------|-----------|-----------------------|-----------|----------------|-------------------------------|
| <div> <div>General</div> <div>Steps</div> <div>Constraints</div> <div>Other Information</div> </div> | | | | | | | | |
| | Order | Path | Action | Formula | Material | Allocated | Value | Descr |
| 1 | ↓ | 0 | Intermediate Input | | Intermediate_Material | | 84.6614 lb | |
| 2 | ↓ | 0 | Agitate | | | | 5.0000 min | |
| 3 | ↓ | 0 | Temperature | | | | 140.0000 deg F | |
| 4 | ⏏ | 1 | Feed | Styrene | Styrene.DR | 48.0000% | 47.9141 lb | Feed over 360 minutes |
| 5 | | 2 | Feed | Butadiene | Butadiene.DR | 50.0000% | 49.9106 lb | Feed over 360 minutes |
| 6 | ⏏ | 3 | Intermediate Input | | Intermediate_Material | | 38.6529 lb | Catalyst feed over 60 minutes |
| 7 | ↓ | 0 | Temperature | | | | 180.0000 deg F | |
| 8 | ↓ | 0 | Intermediate Output | | Intermediate_Material | | 221.3143 lb | |



Procedure – Step Parameters

Edit Step - [3]

General Parameters

Parameters allows you to edit the process parameter values for the step.

| | Valid | Display | Name | Data Type | Minimum | Value | Maximum | Pick List | Scalable | Control Point Type |
|---|-------|-------------------------------------|-----------------|-----------|--------------|----------------|-----------------|-----------|--------------------------|---------------------|
| 1 | ! | <input checked="" type="checkbox"/> | Set Temperature | Real | 0.0000 deg C | 140.0000 deg F | 120.0000 deg C | | <input type="checkbox"/> | Not a Control Point |
| 2 | ! | <input type="checkbox"/> | Start_Time | Real | 0.0000 min | 0.0000 min | 10,000.0000 min | | <input type="checkbox"/> | Not a Control Point |
| 3 | ! | <input type="checkbox"/> | Stop_Time | Real | 0.0000 min | 120.0000 min | 10,000.0000 min | | <input type="checkbox"/> | Control Point |

Edit Parameter...

OK Cancel Help

Procedure – Stage Constraints

Stage: React

General | Steps | Constraints | Other Information

Constraints

| | Name | Type | Description |
|---|--------------------------|--------|--|
| 1 | Material of Construction | String | Material of Construction.0 = Glass Lined Reactor |

Pick List

Constraint Properties

☒ None
☐ Condition
☐ Range
☐ Set

Attached Documents

Item: 30009.Global.0

File View Tools Documents Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Add Launch Remove Export Print

| Document Name | Description | Change Date | Author | File Date | File Size |
|----------------------------|-------------|----------------------|-----------|----------------------|-----------|
| Bale & Weight.jpg | JPEG Image | 4/10/2004 4:32:52 PM | Hall, Ray | 1/29/2004 1:51:43 PM | 51203 |
| Brightness Test Method.pdf | PDF File | 4/10/2004 4:32:52 PM | Hall, Ray | 1/29/2004 2:11:14 PM | 42561 |
| Domestic Bale.jpg | JPEG Image | 4/10/2004 4:32:52 PM | Hall, Ray | 1/29/2004 1:50:33 PM | 16258 |
| Export Bale.jpg | JPEG Image | 4/10/2004 4:32:52 PM | Hall, Ray | 1/29/2004 1:51:21 PM | 45402 |

Other Information

Verification

Related Documents

Image

Done

C:\Documents and Settings\rhall\Local Settings\Temporary Internet Files\P...

File Edit View Favorites Tools Help

C:\Documents and Settings\rhall\Local Settings\Temporary Internet Files\PPB\Bale & Weight.jpg

Address C:\Documents and Settings\rhall\Local Settings\Temporary Internet Files\PPB\Bale & Weight.jpg Go Links

GREAT LAKES Pulp & Fibre

BALE & WEIGHT INFORMATION

For Domestic (2-wire)

10 inches 450 mm

32 inches 810 mm

32 inches 810 mm

10 inches 450 mm

For Export (3-wire)

16 inches 400 mm

32 inches 810 mm

10 inches 400 mm

WEIGHT:
Bales = 550 lb/250 kg
Units = 4400 lb/2000 kg

Export - Unitized

Done

Internet

Audit Trail with Details Shown

The screenshot shows the 'Item: 99999.Lab.0' window with the 'Audit Trail Details' dialog open. The dialog displays a list of changes made to the item, categorized by attribute and formula input. The changes include updates to values, amounts, and descriptions.

| Name | Change Type | From | To |
|--|-------------|-------------|-------------|
| Value | Change | | 0.1000 % |
| Item Attribute Solids (Microwave) Min.0 | | | |
| Value | Change | | 47.0000 % |
| Item Attribute Solids (Microwave) Max.0 | | | |
| Value | Change | | 49.0000 % |
| Item Attribute Viscosity RVT 20 rpm @25C Min.0 | | | |
| Value | Change | | 25.0000 cP |
| Item Attribute Viscosity RVT 20 rpm @25C Max.0 | | | |
| Value | Change | | 75.0000 cP |
| Bill of Materials Default | | | |
| Formula Input Butadiene | | | |
| Amount | Change | 50.0000 lb | 49.9106 lb |
| Description | Change | | r |
| Formula Input Styrene | | | |
| Amount | Change | 48.0000 lb | 47.9141 lb |
| Description | Change | | r |
| Formula Input Acrylic Acid | | | |
| Amount | Change | 2.0000 lb | 1.9964 lb |
| Description | Change | | r |
| Formula Input Water | | | |
| Amount | Change | 115.6587 lb | 105.4214 lb |
| Description | Change | | r |
| Formula Ratio | Change | 120.0000 | 110.0000 |
| Formula Input Dowfax 2A1 | | | |
| Amount | Change | 5.5556 lb | 5.5456 lb |
| Description | Change | | r |
| Formula Input DEE FO 97-3A | | | |
| Amount | Change | 0.1000 lb | 0.0998 lb |

Library of Building Blocks

ProcessPoint Editor - [Actions - Agitate]

File View Search Tools Window Help

New [0400040002] Search Items Signoff

Items

- Fine Paper
- Formula
- Paper Cupsto
- Paper Tissue
- Paper Tissue
- Paper Tissue
- Pulp
- Solvents
- Specialty Pap
- Unclassified
- Library
 - Actions
 - Approval Plan
 - Attributes
 - Item Classes
 - Pick Lists
 - Units of Meas
- Approvals

Done

| Action Name | Ver... | Status | Material Handling | Description |
|--------------------|--------|---------------|----------------------|--------------|
| Add | 0 | Developmental | Adds Material | |
| Add Pressure | 0 | Developmental | No Material Handling | |
| Agitate | 0 | Developmental | No Material Handling | Agitate is u |
| Charge | 0 | Developmental | Adds Material | |
| Crystallization | 0 | Developmental | No Material Handling | |
| Heat | 0 | Developmental | No Material Handling | A form of e |
| Intermediate Input | 0 | Approved | Intermediate Input | Standard a |

Item: 000002.Global.0

File View Tools Steps Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Stage: Formulation

| Order | Action | Formula | Allocated | Formula |
|-------|--------------------|-------------------|-----------|---------|
| 1 | Intermediate Input | | | |
| 2 | Add | Aloe Barbadensis | 100.00% | |
| 3 | Add | Petrolatum | 100.00% | |
| 4 | Add | Dimethicone | 100.00% | |
| 5 | Add | Cocamidopropyl Be | 100.00% | |
| 6 | Agitate | | | |
| 7 | Add | Water | 60.00% | |
| 8 | Heat | | | |

Stage Details

Approvals

Other Information

Verification

Ready

Actions

Type in the name to

- Add.0
- Add Press
- Agitate.0
- Charge.0
- Crystalliz
- Heat.0
- Mix.0
- Operation.
- Pump Out
- Ramp He
- Remove M
- Sample.0
- Sample NI


Role-Based Displays

Item: Template.Template.0

File View Tools Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Template: training demo for screenshot

 **Dow Reichhold Specialty Latex LLC**
Bringing a world of experience to each application.SM

Product Number: Template
Creation Date: Wednesday, March 10, 2004
Modification Date: Tuesday, March 16, 2004

*DOW REICHOLD PROPRIETARY INFORMATION
NOT FOR OUTSIDE DISTRIBUTION*

Monomer Composition

Polymer CAS #

Specifications

| Property | Min. Value | Max. Value |
|----------|------------|------------|
|----------|------------|------------|

Reactor Ingredients













[Raw Material](#) [Dry Parts](#)

Stripper Composition

[Raw Material](#) [Dry Parts](#)

Compound Composition

[Raw Material](#) [Dry Parts](#)

Start |      |  Contacts - ... |  Wrtfyps03\... |  Microsoft P... |  modified dis... |  ProcessPoin... |  Item: Tem... |  11:22 AM


Sample Role-Based Display

Item: 99999.Lab.0

File View Tools Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Template: training demo for screenshot

 **Dow Reichhold Specialty Latex LLC**
Bringing a world of experience to each application.™

Product Number: 99999
Creation Date: Monday, March 15, 2004
Modification Date: Monday, March 15, 2004

*DOW REICHOLD PROPRIETARY INFORMATION
NOT FOR OUTSIDE DISTRIBUTION*

Monomer Composition

| | |
|--------------|-------|
| Butadiene | 50.00 |
| Styrene | 48.00 |
| Acrylic Acid | 2.00 |

Polymer CAS #

Specifications

| Property | Min. Value | Max. Value |
|------------------------------|------------|------------|
| Solids (Microwave) | 47.0 % | 49.0 % |
| pH | 7.0 | 8.0 |
| Residue 100 mesh | | 0.10 % |
| Viscosity RVT 20 rpm @ 25 °C | 25 cP | 75 cP |
| Residual Styrene | | 100 ppm |

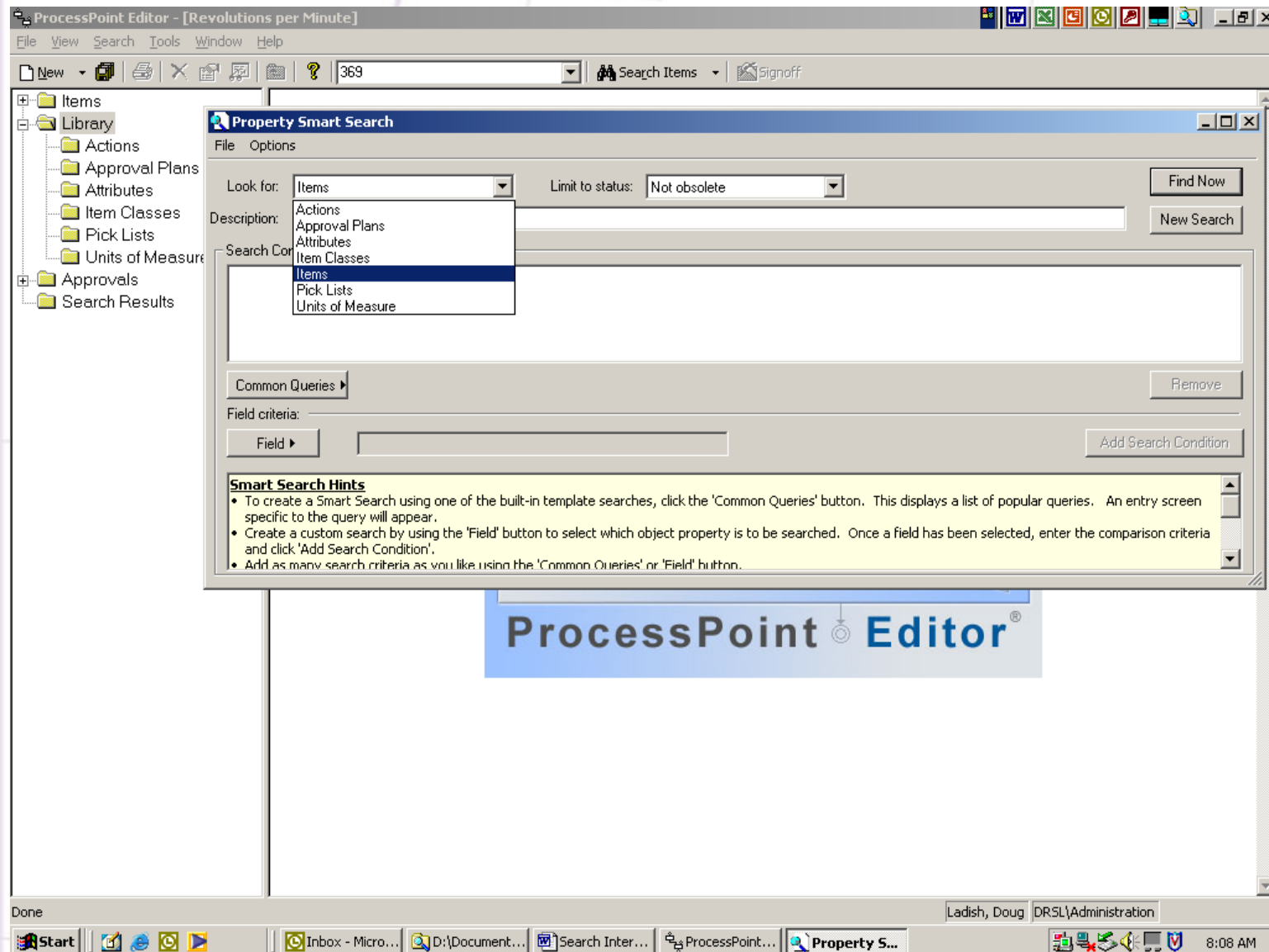
Reactor Ingredients

Raw Material Dry Parts

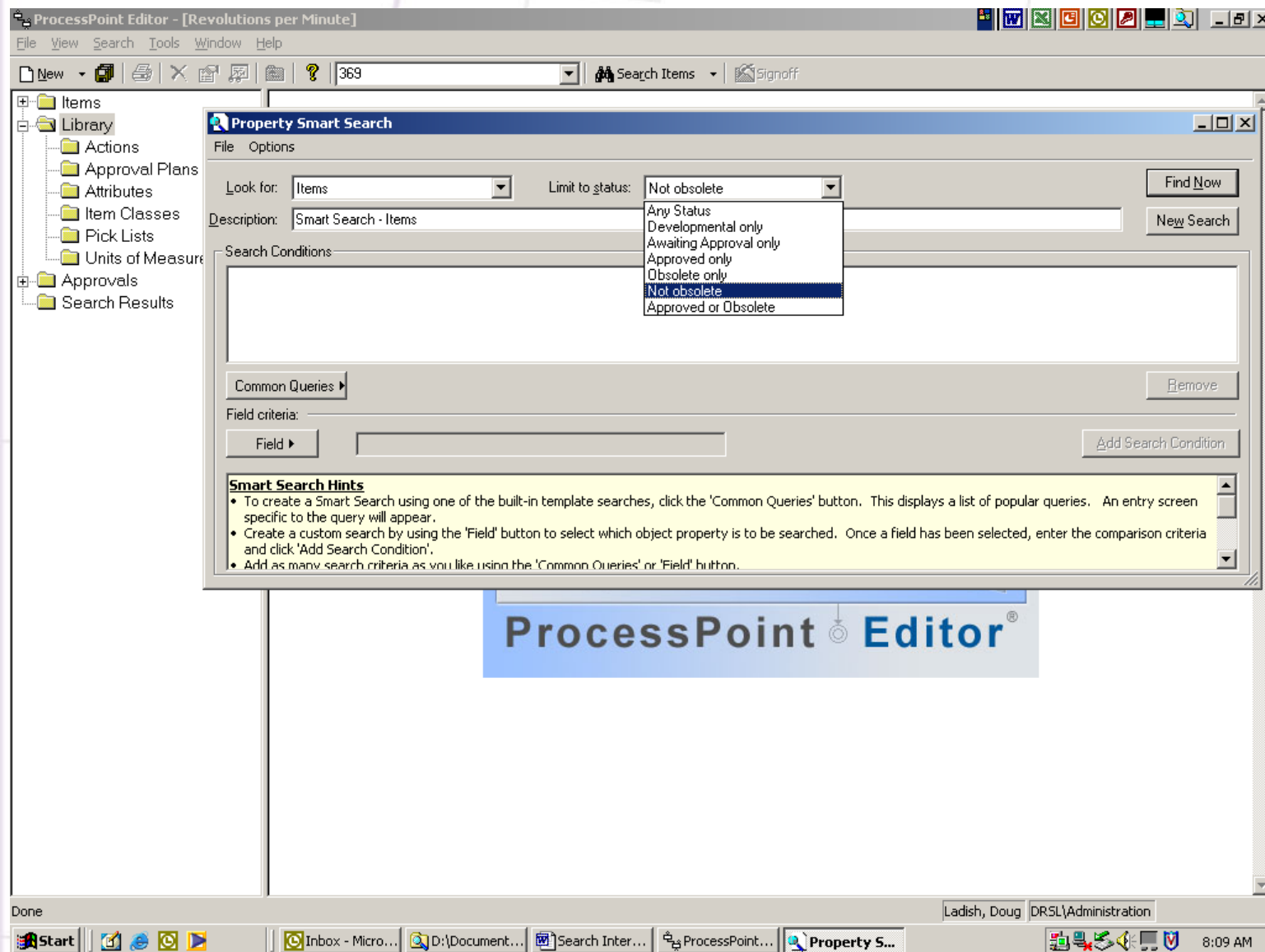
Done

Start | Contacts - ... | \\Rtpfps03\... | Microsoft P... | modified dis... | ProcessPoin... | Item: 999... | 11:26 AM

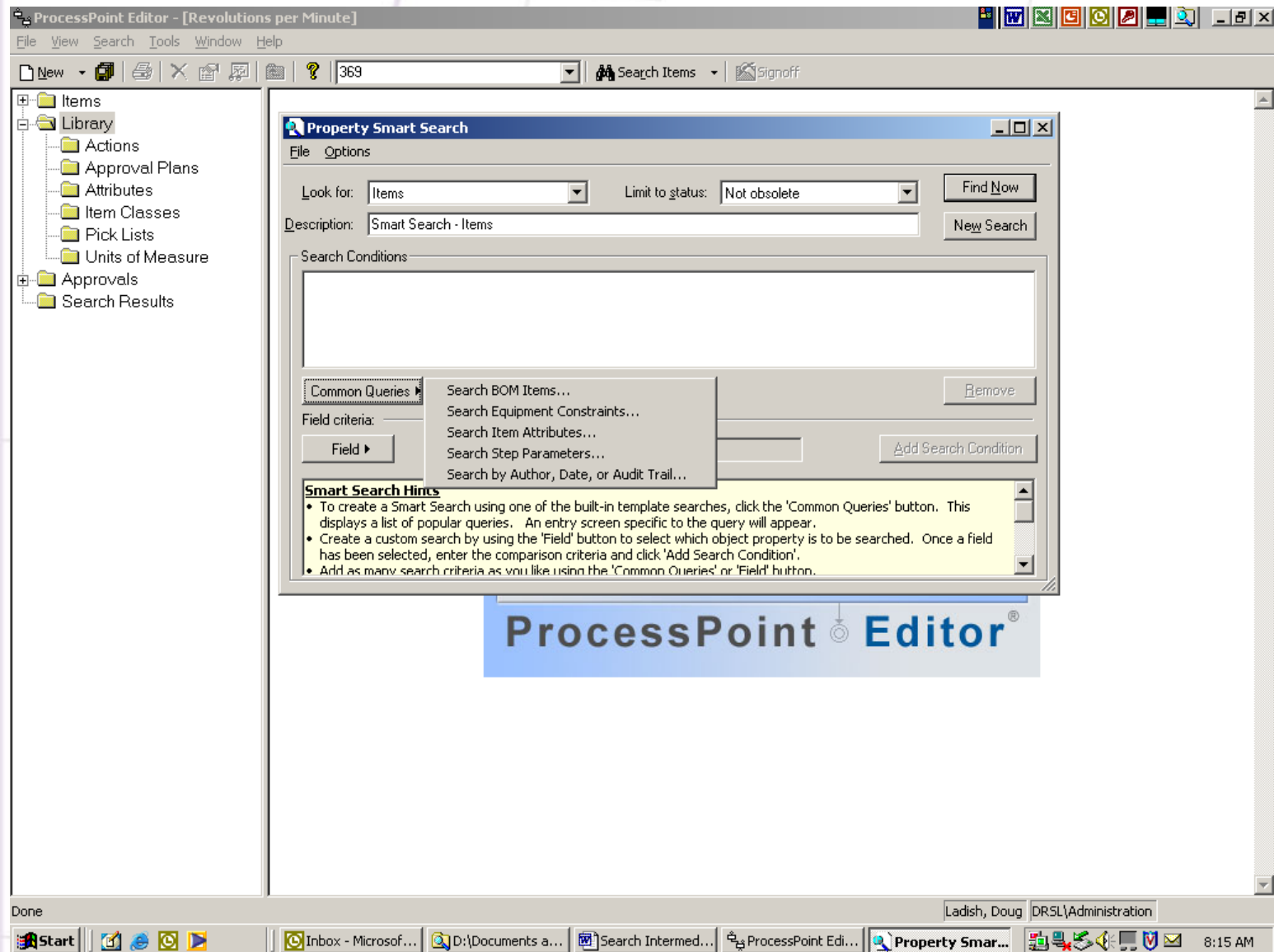
Search Capabilities



Search Capabilities

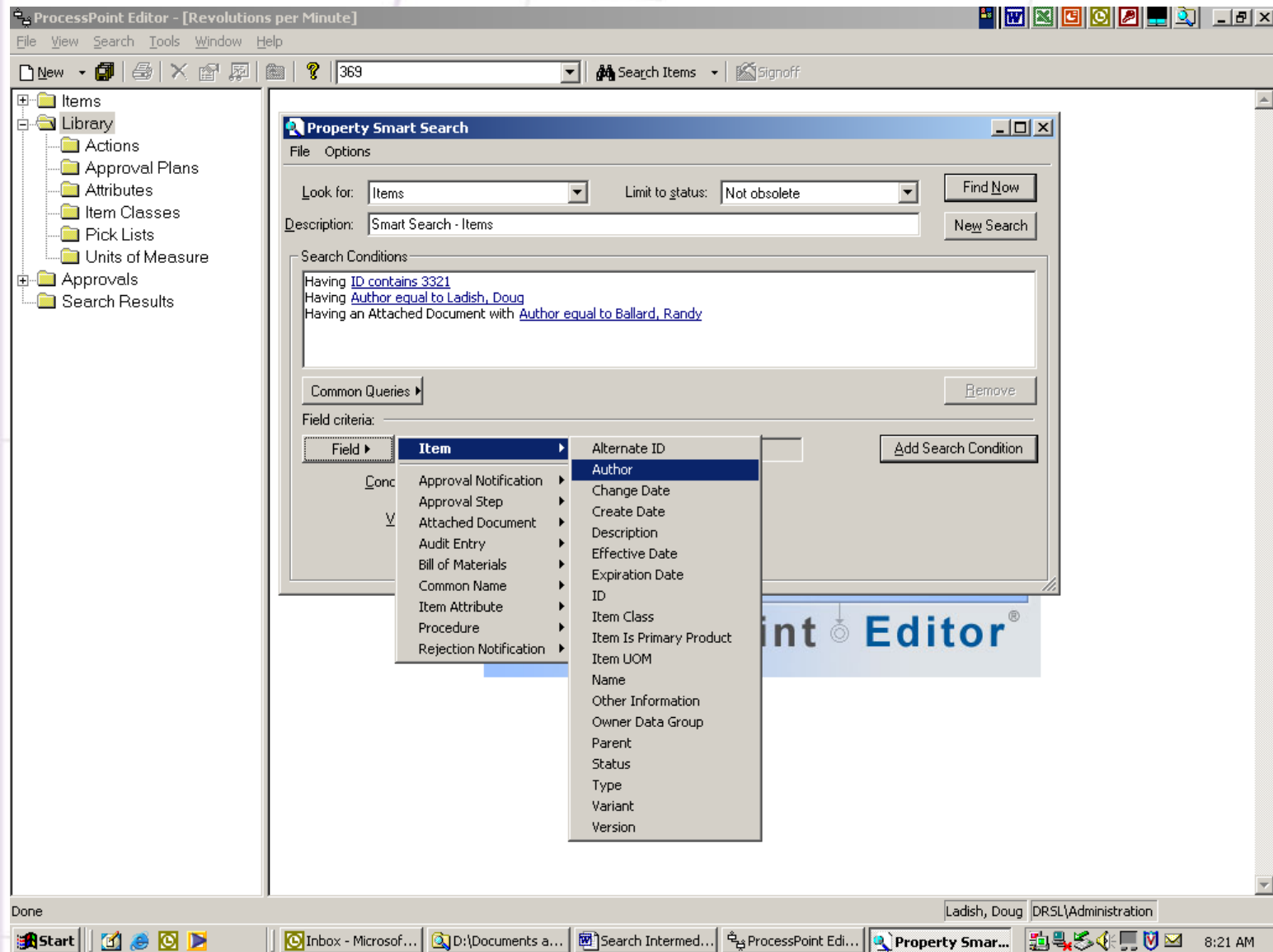


Search Capabilities



The screenshot displays the ProcessPoint Editor application. On the left, a file tree shows a 'Library' folder containing 'Actions', 'Approval Plans', 'Attributes', 'Item Classes', 'Pick Lists', and 'Units of Measure'. Below it are 'Approvals' and 'Search Results' folders. The main workspace is partially obscured by a 'Property Smart Search' dialog box. This dialog box has a 'File' menu and an 'Options' tab. It features a 'Look for:' dropdown set to 'Items', a 'Limit to status:' dropdown set to 'Not obsolete', and a 'Find Now' button. The 'Description:' field contains 'Smart Search - Items', with a 'New Search' button next to it. The 'Search Conditions' section lists three conditions: 'Having ID contains 3321', 'Having Author equal to Ladish, Doug', and 'Having an Attached Document with Author equal to Ballard, Randy'. Below this is a 'Common Queries' button and a 'Remove' button. The 'Field criteria:' section includes a 'Field' dropdown and an 'Add Search Condition' button. At the bottom of the dialog is a 'Smart Search Hints' section with three bullet points: 'To create a Smart Search using one of the built-in template searches, click the 'Common Queries' button. This displays a list of popular queries. An entry screen specific to the query will appear.', 'Create a custom search by using the 'Field' button to select which object property is to be searched. Once a field has been selected, enter the comparison criteria and click 'Add Search Condition'.', and 'Add as many search criteria as you like using the 'Common Queries' or 'Field' button.' The background editor window shows a taskbar at the bottom with the 'Start' button, several application icons, and the text 'Done', 'Ladish, Doug', 'DRSL\Administration', and '8:19 AM'.

Search Capabilities



Search Capabilities

The screenshot displays the ProcessPoint Editor interface with the 'Property Smart Search' dialog box open. The dialog box has a 'File' menu and an 'Options' tab. The 'Look for:' dropdown is set to 'Items', and the 'Limit to status:' dropdown is set to 'Not obsolete'. The 'Find Now' button is visible. The 'Description:' field contains 'Smart Search - Items'. The 'Search Conditions' section lists three conditions: 'Having ID contains 3321', 'Having Author equal to Ladish, Doug', and 'Having an Attached Document with Author equal to Ballard, Randy'. The 'Common Queries' section is expanded, showing a list of field criteria. The 'Field' dropdown is set to 'Item', and the 'Item' dropdown is set to 'Procedure'. The 'Procedure' dropdown is set to 'Stage', and the 'Stage' dropdown is set to 'Step'. The 'Step' dropdown is set to 'Step Parameter', and the 'Step Parameter' dropdown is set to 'Step Parameter Value'. The 'Step Parameter Value' dropdown is set to 'Step Parameter Value'.

ProcessPoint Editor - [Revolutions per Minute]

File View Search Tools Window Help

New [Icons] 369 Search Items Signoff

Items

Library

- Actions
- Approval Plans
- Attributes
- Item Classes
- Pick Lists
- Units of Measure

Approvals

Search Results

Property Smart Search

File Options

Look for: Items Limit to status: Not obsolete Find Now

Description: Smart Search - Items New Search

Search Conditions

Having ID contains 3321

Having Author equal to Ladish, Doug

Having an Attached Document with Author equal to Ballard, Randy

Common Queries

Field criteria:

Field Item

Approval Notification

Approval Step

Attached Document

Audit Entry

Bill of Materials

Common Name

Item Attribute

Procedure

Rejection Notification

Intermediate Material

Procedure Note

Stage

Procedure Ratio Type

Step

Step Parameter

Action Parameter

Control Point Type

Display Step Parameter

Step Parameter Value

int Ed

Equipment Constraint

Description

Duration

Other Information

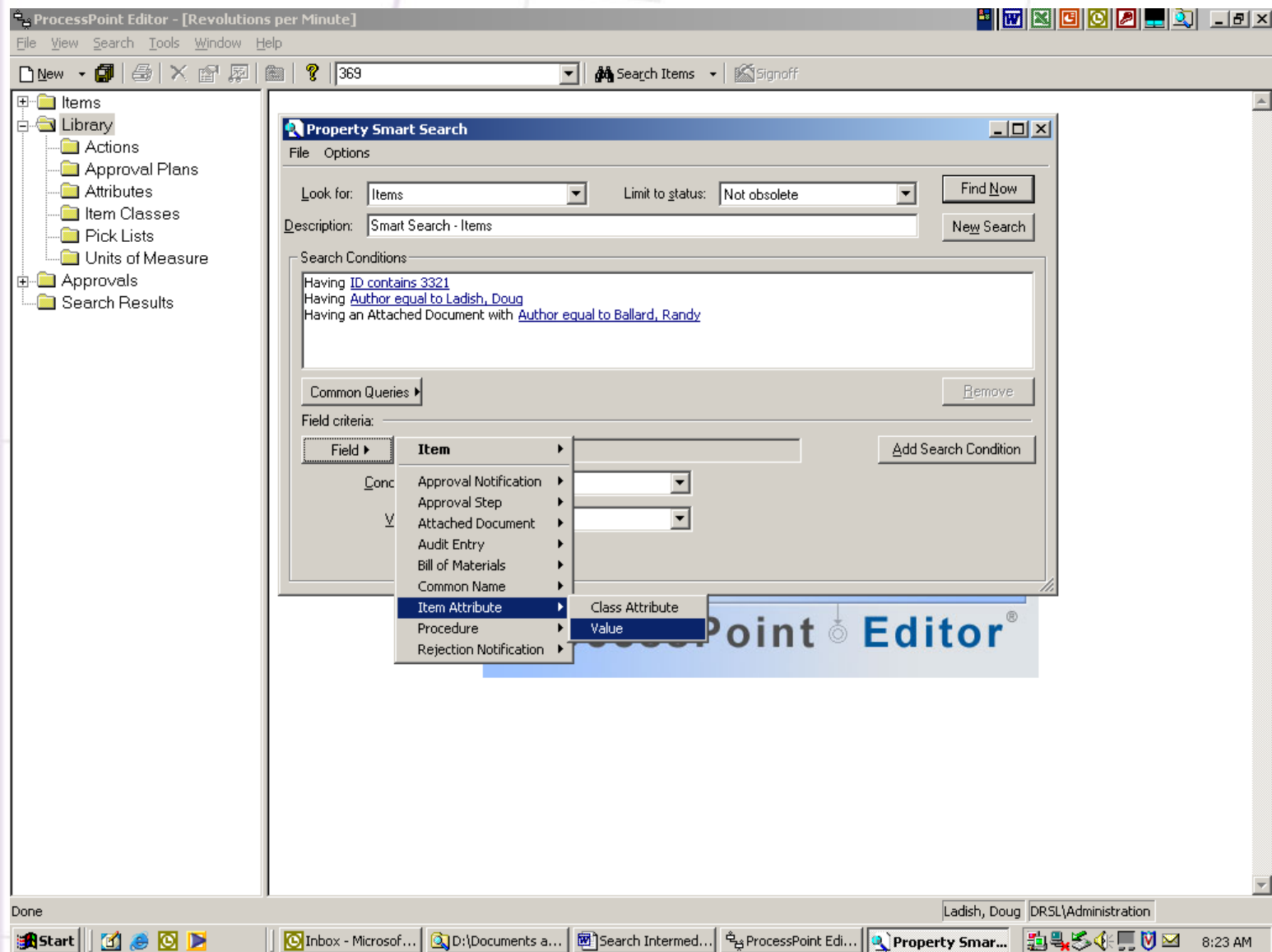
Stage Name

Done

Ladish, Doug DRSL\Administration

Start [Icons] Inbox - Microsof... D:\Documents a... Search Intermed... ProcessPoint Edi... Property Smar... 8:22 AM

Search Capabilities



Search Capabilities

ProcessPoint Editor - [Revolutions per Minute]

File View Search Tools Window Help

New [Icons] 369 Search Items Signoff

Items
Library
Actions
Approval Plans
Attributes
Item Classes
Pick Lists
Units of Measure
Approvals
Search Results

Property Smart Search

File Options

Look for: Items Limit to status: Not obsolete Find Now

Description: Smart Search - Items New Search

Search Conditions

Having ID contains 3321
Having Author equal to Ladish, Doug
Having an Attached Document with Author equal to Ballard, Randy

Common Queries Remove

Field criteria:

Field Item [Add Search Condition]

Approval Notification
Approval Step
Attached Document
Audit Entry
Bill of Materials
Common Name
Item Attribute
Procedure
Rejection Notification

Formula Input
Formula Output
Ingredients
Nutrient Information
Nutrition Facts Label
Adjust for Activity
Adjust for ratio total of 100%
Batch Size
Total Weight

Amount
Description
Descriptive Amount
Display Order
Formula Input Name
Formula Ratio
Ingredient Type
Item
Use Latest Version

Done Ladish, Doug DRSL\Administration

Start [Icons] Inbox - Microsof... D:\Documents a... Search Intermed... ProcessPoint Edi... Property Smar... 8:26 AM

Product Comparisons

- Side by side comparisons allow users to easily compare materials or products

Compare Objects

Side-by-side comparison of two PDM objects.

Compare >>

Object Selection

Object Type: Items

Left Object: 11133346.Global (Acetone)

Right Object: 11133347.Global (Benzene)

Display Options

☐ Show all data

☒ Differences Only

Compare Objects

Compare two objects side-by-side.

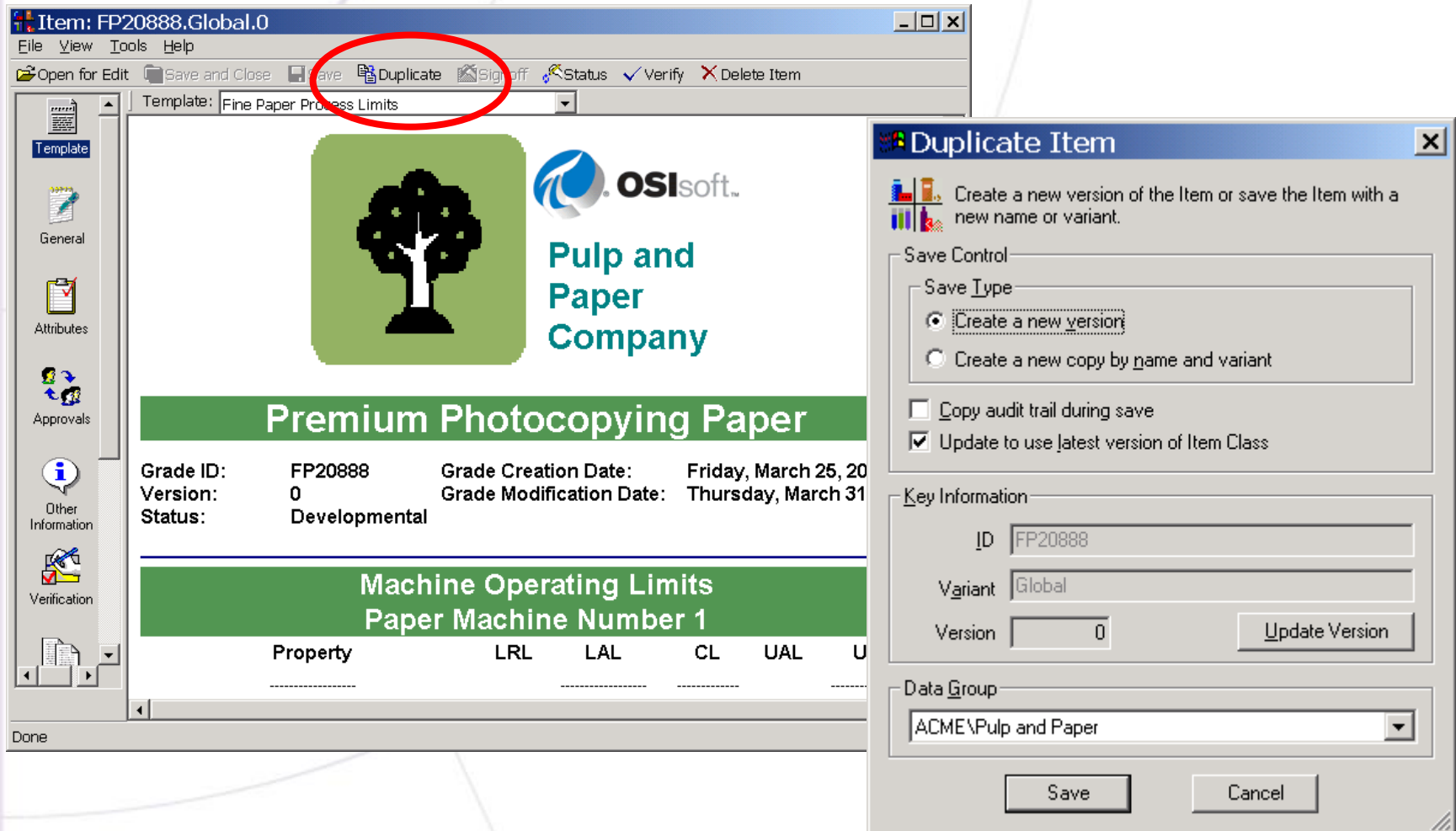
Close

<< Back

| Field Name | 11133346.Global (Acetone) | 11133347.Global (Benzene) |
|-------------------------------|--|--------------------------------|
| Item Attribute Boiling Point | | |
| * Value | 56.2 Celsius | 49.2000 Celsius |
| Item Attribute CAS RN | | |
| * Value | 67-64-1 | 78-43-2 |
| Item Attribute Density | | |
| * Value | 0.7857 Grams per Cubic Centimeter | 0.81 Grams per Cubic Centime |
| Item Attribute Formula | | |
| * Value | CH3COCH3 | C6H6 |
| Item Attribute Health Effects | | |
| * Value | When acetone is inhaled, it irritates the eyes, nose ... | When benzene is inhaled, it ir |
| Item Attribute Odor | | |
| * Value | fragrant, mint-like odor | sweet |

Product Duplicate

- Duplicate an entire product record and all associated information.



Electronic Approvals

- Users can create route plans, and automatically route

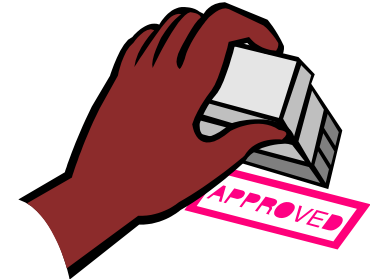
Edit Approval Plan - [Formula MP]

General | **Approval** | Verification Results | Referenced By

Approval Steps allows you to add, edit and delete approval plan steps.

| | Order | Approving Group | Approval Role | Assigned User | Step Type |
|---|-------|-----------------------------------|---------------|----------------|------------------|
| 1 | 1 | 308 - PD Manager | MSDS | Gus Fiebig | Signoff Required |
| 2 | 2 | 308 - PD Manager | Regulatory | Rich Main | Signoff Required |
| 3 | 3 | 309 - PD Formulator | Original | | Signoff Required |
| 4 | 4 | 311 - PD Process Engineer | Process Eng. | | Signoff Required |
| 5 | 5 | 308 - PD Manager | Manager | | Signoff Required |
| 6 | 6 | 313 - QA Formula Management Group | Corp. QA | Michael Bugajs | Signoff Required |

New Step Delete Step



Edit Item - [61711701.GLOBAL (Plastic Tube - Decorated)]

General | Properties | Attributes | Other Information | Image | **Approval** | Related Documents | Audit Trail | Verification Results | Referenced By

Approval Steps allows you to add, edit and delete approval plan steps.

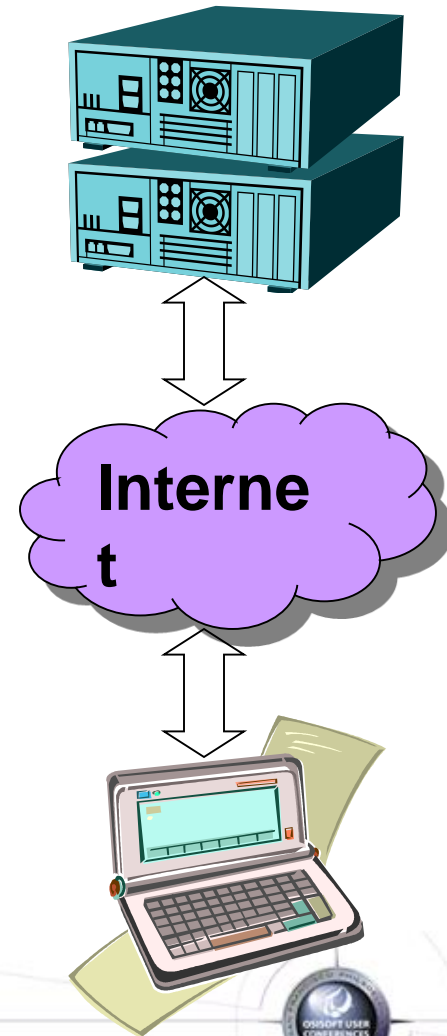
| | Order | Approving Group | Assigned User | Status | Receipt Time | Signoff User | Signoff Time |
|---|-------|--------------------------|-------------------|----------------------|-----------------------|-------------------|------------------------|
| 1 | 1 | 321 - Packaging Engineer | Lakshmi Hazra | Approved | 10/14/2002 9:23:03 AM | Lakshmi Hazra | 10/14/2002 9:23:08 AM |
| 2 | 2 | 308 - PD Manager | Michael Konieczny | Approved | 10/14/2002 9:23:08 AM | Michael Konieczny | 10/16/2002 10:20:55 AM |
| 3 | 2 | 320 - Packaging Manager | Bob Novy | Waiting for Response | 10/14/2002 9:23:08 AM | | |

New Step Delete Step Options ▾

OK Cancel Help

Smart Client and Internet Access

- ProcessPoint covers the complete breadth of the new product innovation cycle from initial concept to shippable product with:
 - ProcessPoint Server - central web services data repository that is used to capture the knowledge about a company's products
 - ProcessPoint Client – client-based tools that capture the data about a company's products and enhance the way this information is shared
 - ProcessPoint Tools – client-based tools that enable the implementation and commissioning of ProcessPoint, including bulk loading, display authoring and administration



ProcessPoint is:

- Comprehensive product and process specification database
- System of record for pre-process information
 - Product properties
 - Quality limits
 - Raw materials
 - Manufacturing procedures
 - Product history
- Rich management tools
 - Approval and electronic signoffs
 - Audit trail
 - Versioning
 - Multi-department security
 - Compare, duplicate, etc.
- Provides PI Point limits, targets to PI clients





Business Example: Dow Reichhold

Dow Reichhold Specialty Latex

- 50/50 joint venture of The Dow Chemical Company and Reichhold, Inc. (DRSL)
- Formed in January 2002
- World's largest producer of specialty latex
- Develops customized technologies & products
- Innovation, speed and teamwork are key elements of the DRSL business model



Locations

- Headquarters and Research & Development
 - Research Triangle Park, NC
- Primary Manufacturing Locations
 - Cheswold, Delaware
 - Kensington, Georgia
- Other Manufacturing
 - North America , Europe
 - Latin America , Asia/Pacific Region



Products

- Polymer Types
 - Styrene Butadiene
 - Nitriles
 - Acrylates
 - Specialty Co-Polymers



Applications

- Adhesives
- Packaging
- Construction
- Gloves
- Nonwovens and Textiles
- Performance Resins
- Specialty Paper
- Latex Modified Concrete

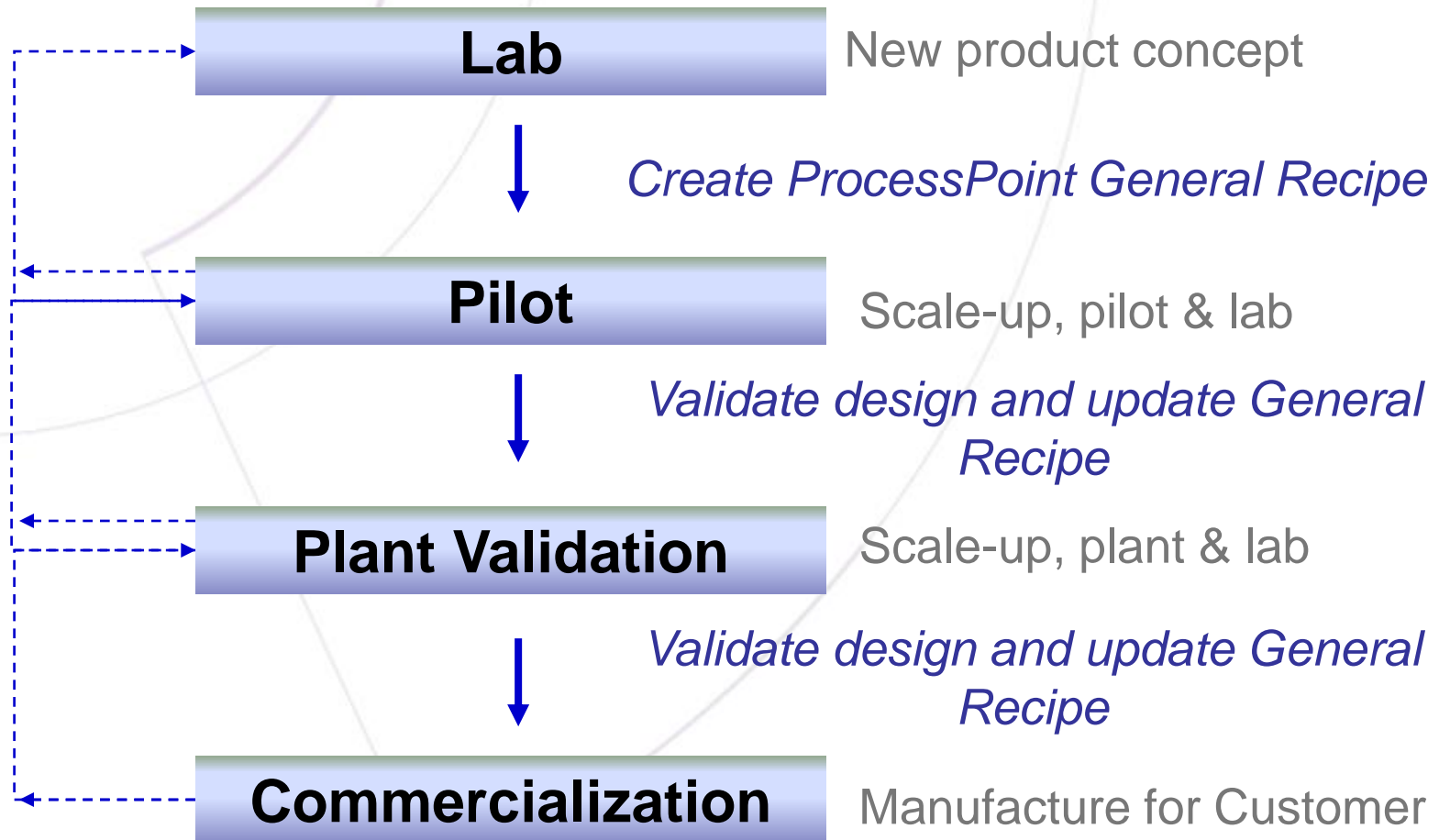


Drivers for ProcessPoint

- Global R&D, Manufacturing and Sales
- Challenges of bringing systems together from Reichhold and Dow Chemical
- Recipe management in general
 - Management of change for existing products
- Product innovation management
 - Speed to market for new products



Innovation Process



Project Team

- Management Support
 - VP of Technology – creates recipes
 - VP of Manufacturing – uses recipes
- Core
 - Manufacturing
 - Research & Development
 - Environmental, Health & Safety
 - Process Engineering
- Other Team Members
 - Finance, Purchasing, Pilot Plant



Key Requirements

- “One version of the truth” through global database
 - Across departments & geographical locations
- Facilitate company-wide collaboration
- Flexible recipe development & management
 - Key ingredients, activity based descriptions
- Searchable recipe database
 - Legacy data was in Excel, difficult to manage
- Management of change
 - Audit trail, Electronic approvals, Versioning
- Security of intellectual capital



Other Factors in Selection of ProcessPoint

- ISA S88 General Recipe Standard
- Raw material management
- Role based views using Display Templates
 - Internal & Customer
- Flexibility for additional uses of software
 - Marketing, Regulatory, Enterprise accounting
- Positive experience with OSIsoft
 - Using PI software at manufacturing sites



Project Scope

- Raw Materials
 - Properties
- Intermediates & Products
 - Properties
 - Formula
 - Procedures
- Final Products
 - Key properties
 - Packaging data



Project Scope – Raw Materials

- Each vendor raw material specification is authored, approved & versioned by Purchasing/Technology/EHS
- Latest specifications accessed in real time by Receiving Personnel to ensure C of A compliance
- R & D, Manufacturing have real-time access to the most recent approved raw material data and related documents



Project Scope – Intermediates & Bulk Product

- Technology
 - Typical properties
 - Quality specification limits
 - “Dry Parts” activity based formula
 - General recipe composition, procedure, specifications
- E H & S
 - Health, safety and environmental risks
 - Labeling needs
 - Regulatory compliance status
- Manufacturing
 - Product scale-up
 - Master Recipe



Project Scope – Packaged Product

- Package codes
- Key final product properties
- Product display templates used by salespeople and customers

Anticipated Benefits

- Enhanced collaboration
- Improved scale-up practices
 - Fewer errors
 - Reduced time to manufacturing
 - Improved quality
 - Metrics on new product development process
- Improved management of change
 - Single authoritative source of data
 - Networked application
 - User defined displays of data
- Searchable Data Base



Summary – Benefits Realized

Single, authoritative source of product information for other business systems

- Master Recipes – composition, **DCS procedure and parameters, LIMS specifications**
- Raw Materials – approved materials and receiving specifications
- Enterprise accounting – material masters, scheduling, costing
- **Regulatory – national chemical inventories and FDA status**
- Marketing – active products, package types and sales specifications

Product innovation management

- Recipes reflect both “wet” and “dry” composition
- **Organizational collaboration**
- Accuracy of development plans and results
- Searchable data base
- Record of changes

Intellectual property

- **Faster, more insightful management of change**
- Record of changes – both events and details
- Limited access to view or change as appropriate





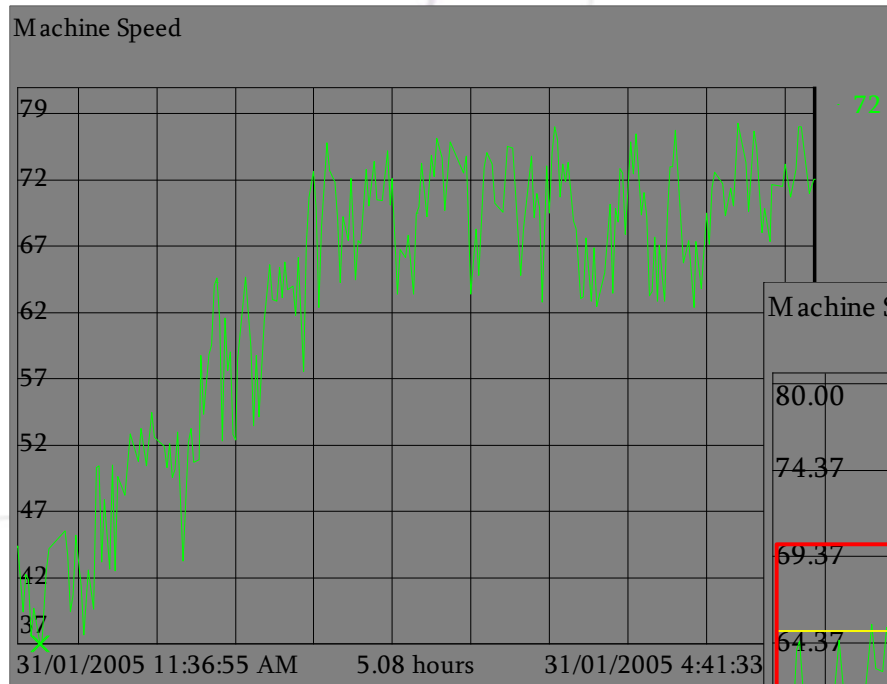
RtPM Integration

ProcessPoint Fit with RtPM

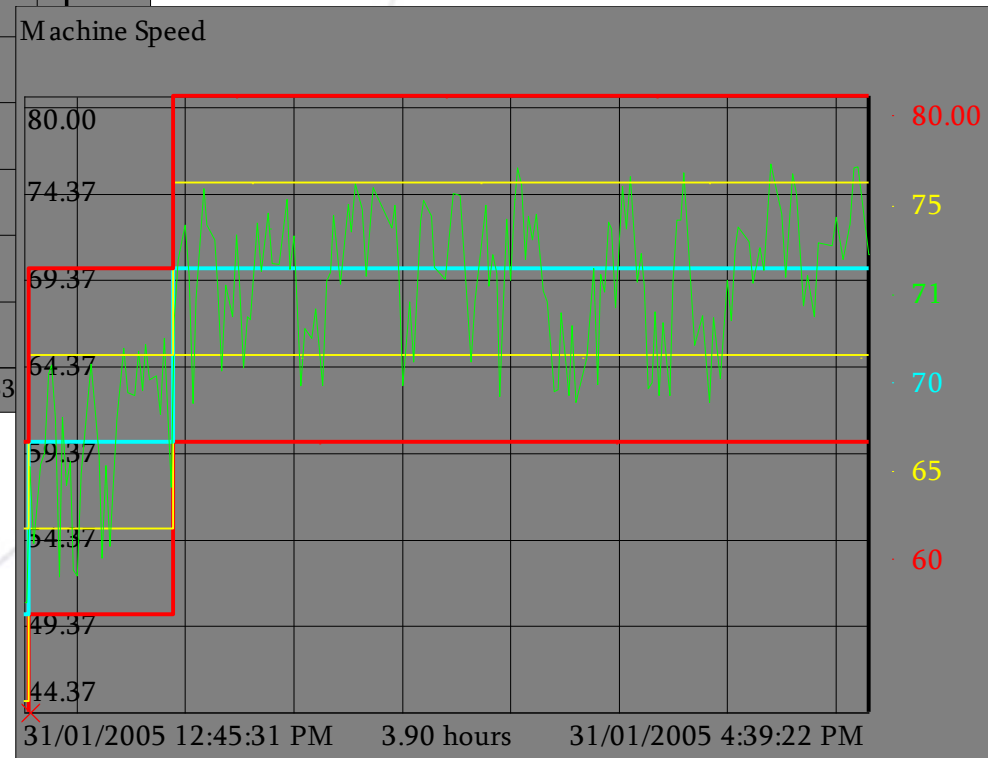
- The PI System stores the complete history of ***what has happened*** in the process
- ProcessPoint stores the specifications that define how the process ***should*** run
- Like the PI System does for real-time data, ProcessPoint stores the history of spec data forever and allows it to be used in meaningful ways
- Integration scenarios involve comparison of actual vs. planned



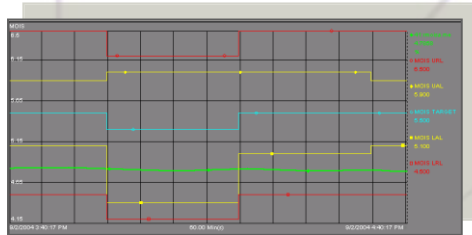
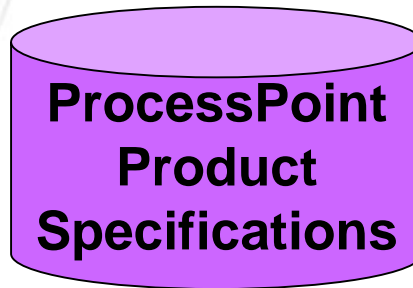
Why Integrate: The Power of Contextual Data



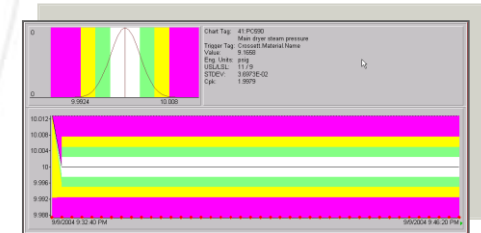
Limits add additional value to the PI actual data. Many PI tags have some measure of correctness.



Single source of spec data for the RtPM Platform



**ProcessBook
Screens & Trends**



**SQC Add-In to
ProcessBook**

| Priority | Tagname | AI State | Time | P | Description |
|----------|-------------------------|----------------|---------------------|---|-------------------------------------|
| 1 | Crossett PM1 Basis Wt | OutsideControl | 9/9/2004 9:45:14 AM | 2 | Crossett Paper Machine 1 Basis Wt |
| 2 | Crossett PM1 Caliper | OutsideControl | 9/9/2004 9:51:18 AM | 2 | Crossett Paper Machine 1 Caliper |
| 3 | Crossett PM1 Brightness | OutsideControl | 9/9/2004 9:52:26 AM | 2 | Crossett Paper Machine 1 Brightness |

| Tagname | Server | Descriptor | P | AI State | Time | Ack'd |
|-----------------------|-----------|------------------|----------------------|----------|---------------------|-------|
| Crossett PM1 Basis Wt | localhost | Crossett Paper | Cleared | | 9/9/2004 9:45:28 AM | |
| Crossett PM1 Basis Wt | localhost | Crossett Paper 2 | OutsideControl - ACK | | 9/9/2004 9:45:58 AM | |
| Crossett PM1 Basis Wt | localhost | Crossett Paper 2 | OutsideControl - ACK | | 9/9/2004 9:47:14 AM | |
| Crossett PM1 Basis Wt | localhost | Crossett Paper 2 | OutsideControl - ACK | | 9/9/2004 9:47:16 AM | |
| Crossett PM1 Basis Wt | localhost | Crossett Paper 2 | OutsideControl - ACK | | 9/9/2004 9:48:14 AM | |

SQC Alarms

A screenshot of the RtReports interface. It shows a list of alarms with columns for "Batch", "Product", "Recipe", "Start Time", and "End Time". The list includes alarms for "Crossett PM1 Basis Wt", "Crossett PM1 Caliper", and "Crossett PM1 Brightness".

| Batch | Product | Recipe | Start Time | End Time |
|----------------------|----------------|------------------|---------------------|---------------------|
| 41000000000000000000 | Crossett Paper | Crossett Paper | 9/9/2004 9:45:14 AM | 9/9/2004 9:45:28 AM |
| 41000000000000000000 | Crossett Paper | Crossett Paper 2 | 9/9/2004 9:45:58 AM | 9/9/2004 9:47:14 AM |
| 41000000000000000000 | Crossett Paper | Crossett Paper 2 | 9/9/2004 9:47:16 AM | 9/9/2004 9:48:14 AM |

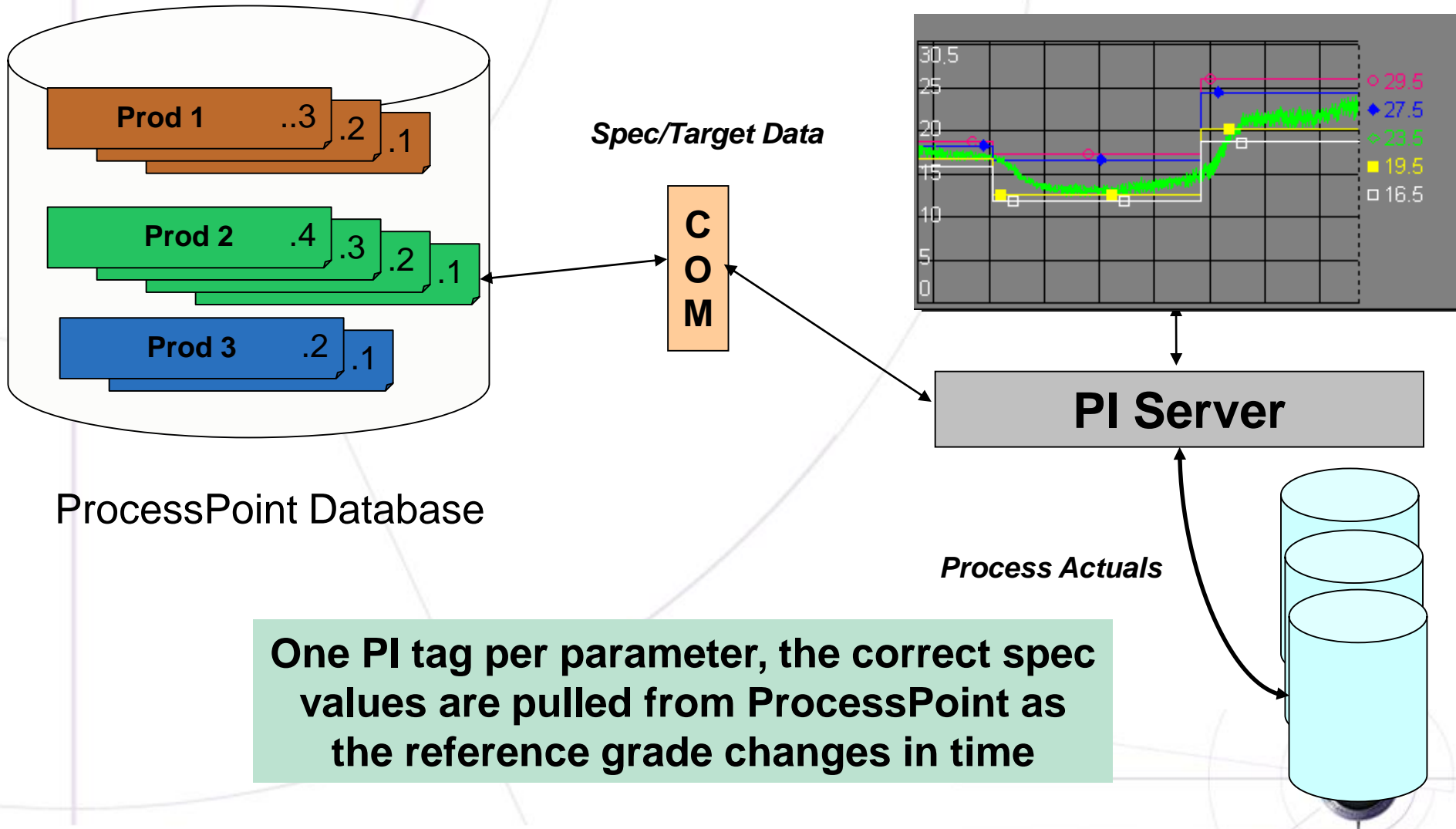
RtReports

Integration of Specs & Actual Results

**How do ProcessPoint Tag Specs
work with PI Clients?**



COM Connector



For all OSIsoft RtPM Clients

ProcessBook

AlarmView

Batch

SQC

DataLink

Data Entry Grid

RtWebParts

RtReports



For all OSIssoft RtPM Clients

ProcessPoint provides ability to
define, document and manage
specifications, limits & targets
(the Tag Specs)
associated with quality, process
and KPIs.



Within ProcessPoint: Set Attributes and Targets

Item: DL10011849.Global.0

File View Tools Attributes Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Import

| | Valid | Name | Value | UOM | |
|----|-------|-----------------------------------|----------------|----------------------------|------------|
| 1 | ! | CAS RN | 240-12-35 | | |
| 2 | ! | Appearance | Golden Liquid | | |
| 3 | ! | Formula | C20H25N3O | | |
| 4 | ! | Purity - Min QA Spec | 97.5000 % | Percent | minimum |
| 5 | ! | Purity - QA Spec | 98.0000 % | Percent | target pu |
| 6 | ! | Purity - Max QA Spec | 100.0000 % | Percent | maximum |
| 7 | ! | Molecular Weight - Min QA Spec | 210.0000 other | Other | Minimum |
| 8 | ! | Molecular Weight - QA Spec | 230.0000 other | Other | Target m |
| 9 | ! | Molecular Weight - Max QA Spec | 250.0000 other | Other | Maximum |
| 10 | ! | Density - Min QA Spec | 1.2000 g/cm3 | Grams per Cubic Centimeter | minimum |
| 11 | ! | Density - QA spec | 1.2500 g/cm3 | Grams per Cubic Centimeter | target de |
| 12 | ! | Density - Max QA Spec | 1.3000 g/cm3 | Grams per Cubic Centimeter | maximum |
| 13 | ! | Catalyst A Residual - Min QA Spec | 0.0000 % | Percent | |
| 14 | ! | Catalyst A Residual - QA Spec | 1.5000 % | Percent | Target Q |
| 15 | ! | Catalyst A Residual - Max QA Spec | 3.0000 % | Percent | Max Cata |
| 16 | ! | Catalyst B Residual - Min QA Spec | 0.0000 % | Percent | |
| 17 | ! | Catalyst B Residual - QA Spec | 0.7500 % | Percent | Target Q |
| 18 | ! | Catalyst B Residual - Max QA Spec | 1.5000 % | Percent | Max Cata |
| 19 | ! | Viscosity - Min QA Spec | 0.1000 Pa*s | Pascal-Seconds | minimum |
| 20 | ! | Viscosity - QA Spec | 0.1500 Pa*s | Pascal-Seconds | target vis |

Ready

Template
General
Attributes
Bill of Materials
Procedure
Stage Details
Approvals
Other Information

Within ProcessPoint: Specified Raw Materials

Item: DL10011849.Global.0

File View Tools BOM Help

Open for Edit Save and Close Save Duplicate Signoff Status Verify Delete Item

Batch Size: 1950.0000 kg / Primary Product %: 3.70% = Total Weight: 52702.70270203 kg

Output Totals:

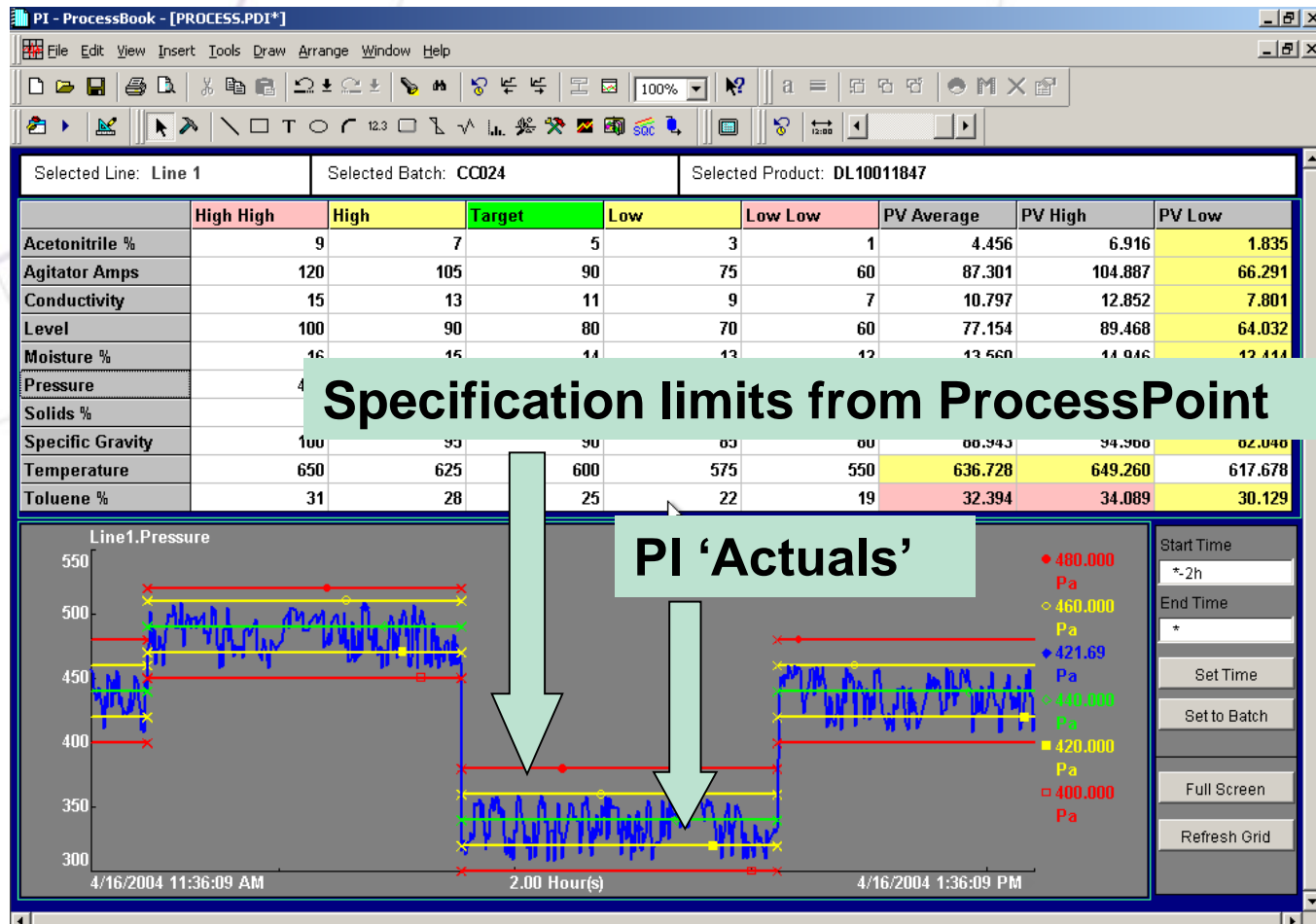
| | Name | Product Type | Formula Ratio | Formula Amount |
|---|-------------------|-----------------|---------------|----------------|
| 1 | 10015805 | Primary Product | 3.70% | 1.950.0000 kg |
| 2 | Water | By-Product | 64.00% | 33.729.7297 kg |
| 3 | Acetic Acid | Co-Product | 23.50% | 12.385.1351 kg |
| 4 | Hydrogen Chloride | By-Product | 6.50% | 3.425.6757 kg |
| 5 | Carbon Dioxide | By-Product | 2.30% | 1.212.1622 kg |
| | | | 100.00% | 52.702.7027 kg |

Input Totals:

| | Name | Formula Ratio | Allocated % | Formula Amount | Des |
|----|--------------------------|---------------|-------------|----------------|-----|
| 1 | Deionized water | 46.25% | 100.00% | 24.375.0000 kg | |
| 2 | dI-Acid active ingredier | 4.23% | 100.00% | 2.229.5878 kg | |
| 3 | THF | 18.96% | 93.65% | 9.993.7500 kg | |
| 4 | Magnesium | 0.90% | 100.00% | 475.3125 kg | |
| 5 | MeCl | 0.92% | 100.00% | 483.8437 kg | |
| 6 | MMC | 6.13% | 100.00% | 3.230.6757 kg | |
| 7 | HCl | 5.55% | 100.00% | 2.925.0000 kg | |
| 8 | KOH | 2.06% | 100.00% | 1.085.6757 kg | |
| 9 | Toluene | 12.50% | 100.00% | 6.587.8378 kg | |
| 10 | Benzene | 2.50% | 0.00% | 1.317.5676 kg | |
| | | 100.00% | | 52.704.2508 kg | |

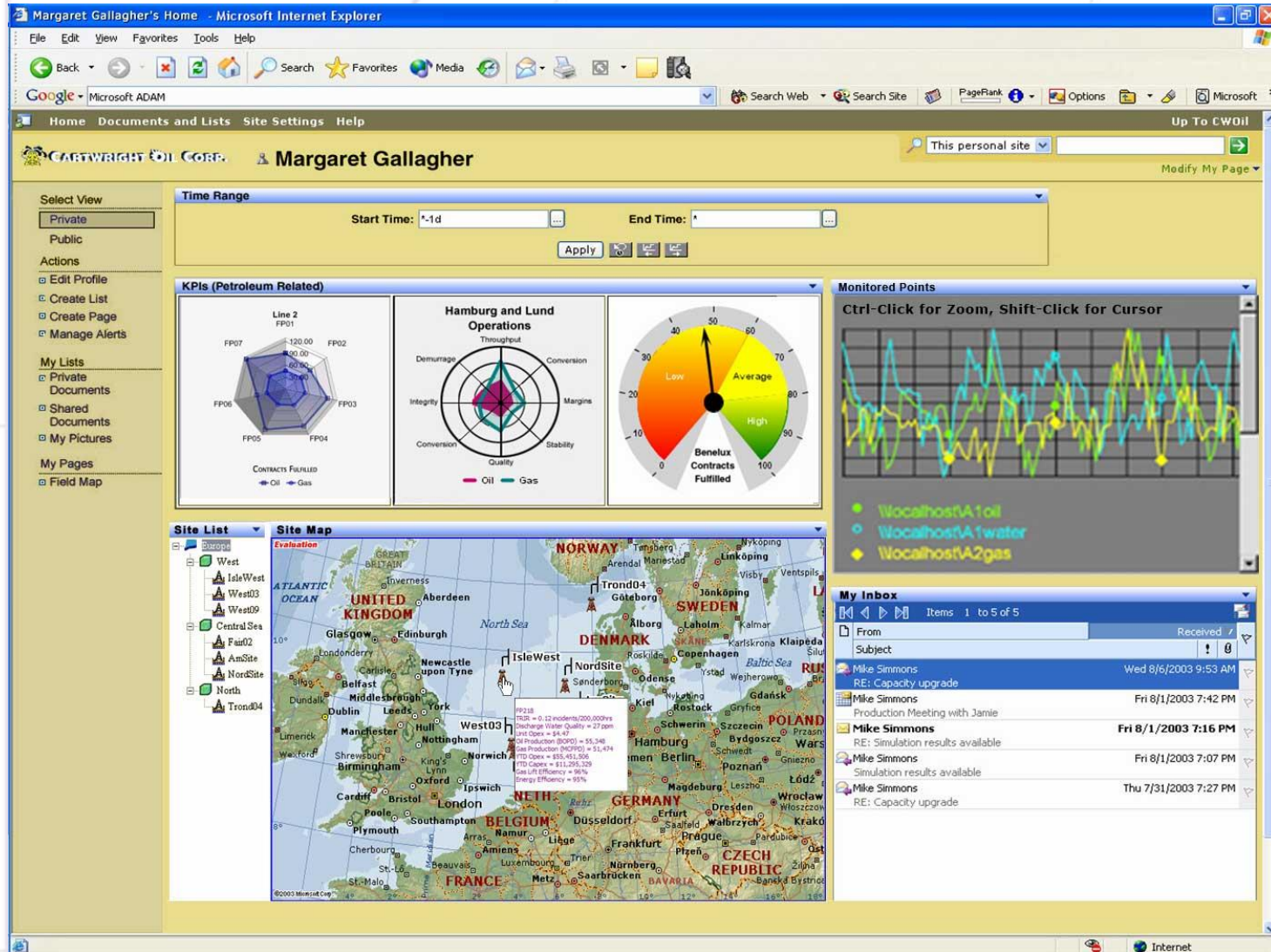
Ready

Integration with ProcessBook



As the product code on a line changes, the correct limits are automatically pulled from the ProcessPoint database.

Integration with RtPortal



ProcessPoint Web Parts

ProcessPoint Portal Server - Microsoft Internet Explorer


File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Copy Paste

Address <http://osips/ProcessPoint/default.aspx> Go Links

OSIsoft My Site Site Settings Help

Home **ProcessPoint**

 ProcessPoint Portal Server
ProcessPoint

This topic

Current Location

Home

ProcessPoint

Actions

- Create Subarea
- Change Settings
- Manage Security
- Manage Content
- Manage Portal Site
- Add to My Links
- Alert Me
- Edit Page

ProcessPoint Search

Search Text: Search

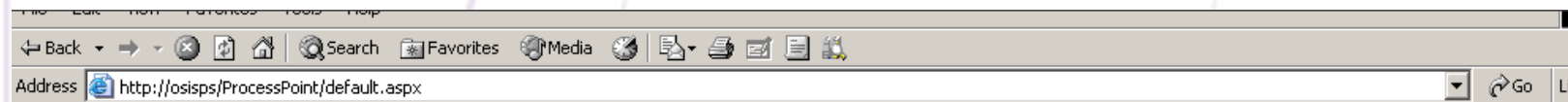
Search Type:

| Name | Compound Name | Data Group | Status |
|--|---------------------|----------------|---------------|
| Cyclotene | 005293.Global.0 | Library | Developmental |
| Cyclotene | 005293.Global.1 | Library | Developmental |
| Cyclotene | 005293.Global.2 | Library | Developmental |
| Mesitylene | 3210998.Global.0 | Library | Developmental |
| B-staged divinylsiloxane-bis-benzocyclobutene | 3980224.Global.0 | Library | Developmental |
| Propylene | 50000002.Global.0 | Library | Developmental |
| Styrene | 50000003.Global.0 | Library | Developmental |
| Ethylene | 50000005.Global.0 | Library | Developmental |
| Perchloroethylene | 700000103.Global.0 | Pulp and Paper | Developmental |
| Benzene | 700000123.Global.0 | Library | Approved |
| Toluene | 700000127.Global.0 | Library | Developmental |
| Xylene | 700000133.Global.0 | Library | Developmental |
| 1,3-Butylene Glycol | 70098455.Global.0 | Library | Developmental |
| 2,6-bis-4-azidophenylmethylene-4-ethylcyclohexanone | 9033265.Global.0 | Library | Developmental |
| Bicyclo[3.3.1]heptan-3-ol, 6,6-dimethyl-2-methylene | DL10011845.Global.0 | Pharma R and D | Developmental |

ProcessPoint Template Display

No Items have been selected.

ProcessPoint Web Parts



ProcessPoint Template Display

Template:

OSIsoft Chemical Company

Raw Material Specification Sheet

Name: **Benzene**

ID: **700000123**

Modification Date: **Thursday, April 15, 2004**

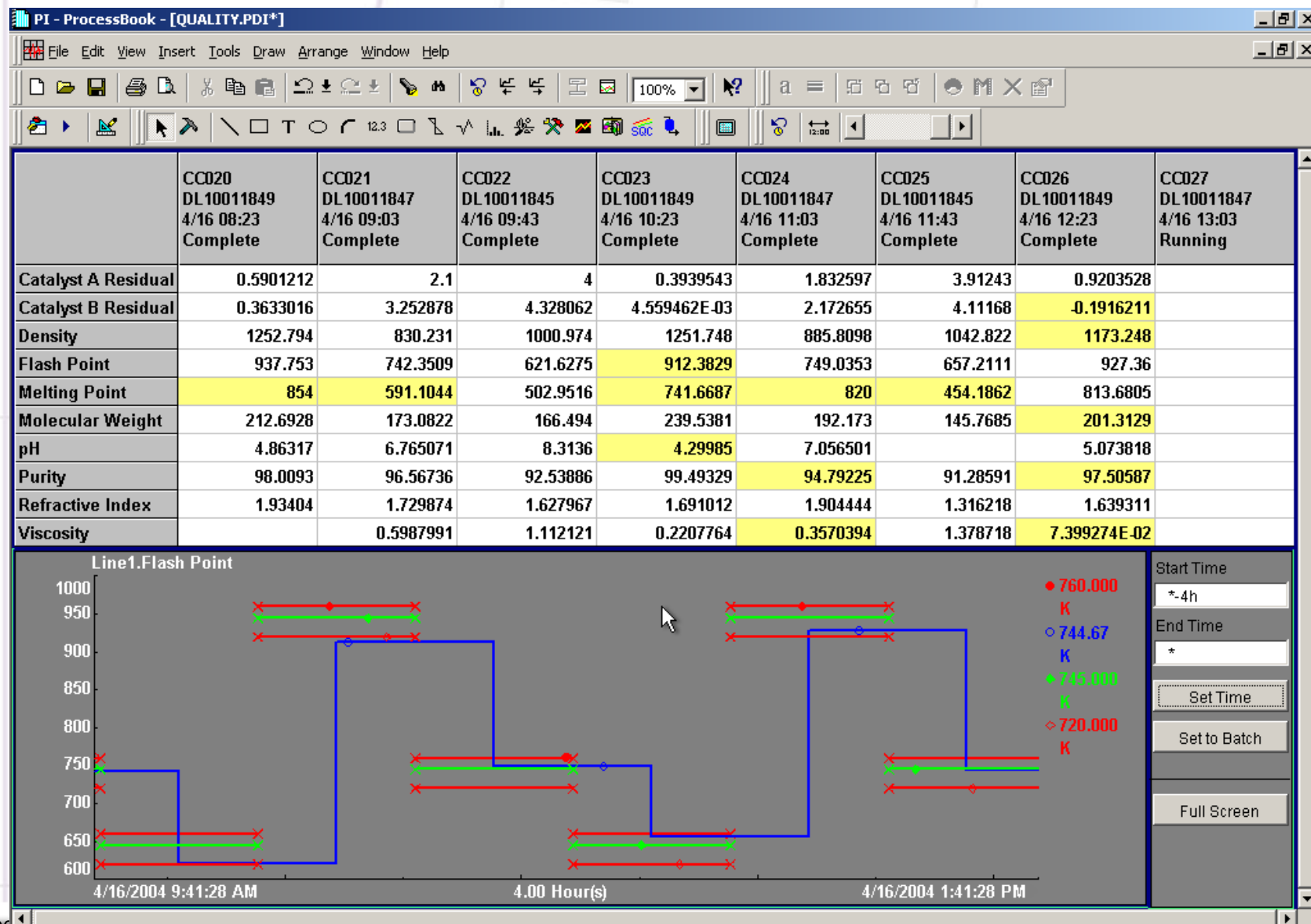
| | Parameter | Specifications | |
|--|--------------------------|--------------------|--|
| | Specific Gravity at 20 C | 0.86 to 0.89 g/cm3 | |
| | Viscosity at 20 C | 0.73 to 0.78 cP | |
| | Boiling Point | 78 to 82 deg C | |
| | Flash Point | -13 to -9 deg C | |

Read precautionary information and Material Safety Data Sheets.

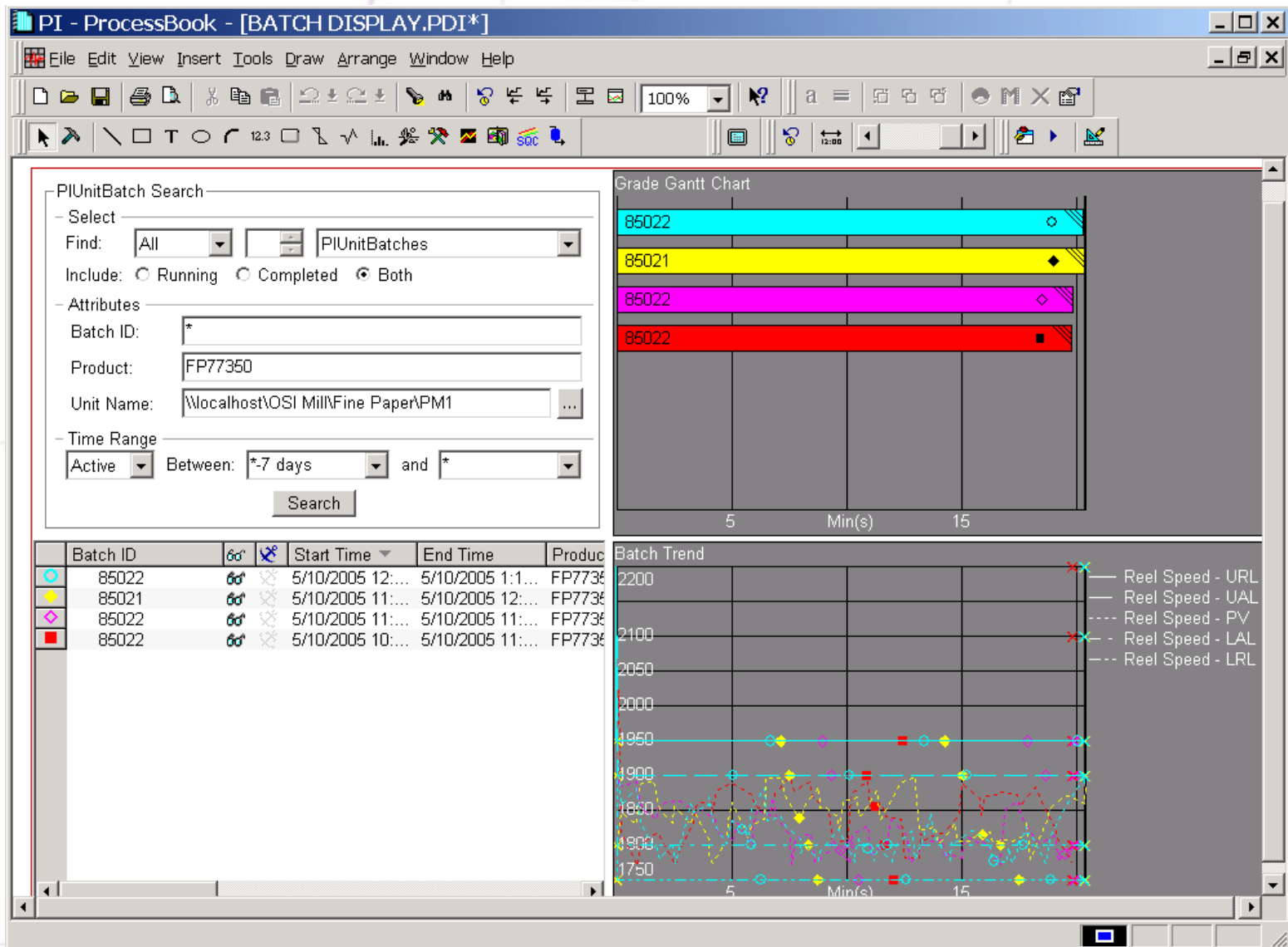
The raw material specifications have been audited and approved by OSIsoft Process Engineering. Compliance with these specifications is required for each shipment of raw material received. Compare the certificate of analysis accompanying each shipment with the specifications defined here. If a load is not in compliance with OSIsoft Engineering requirements, notify shift manager immediately.



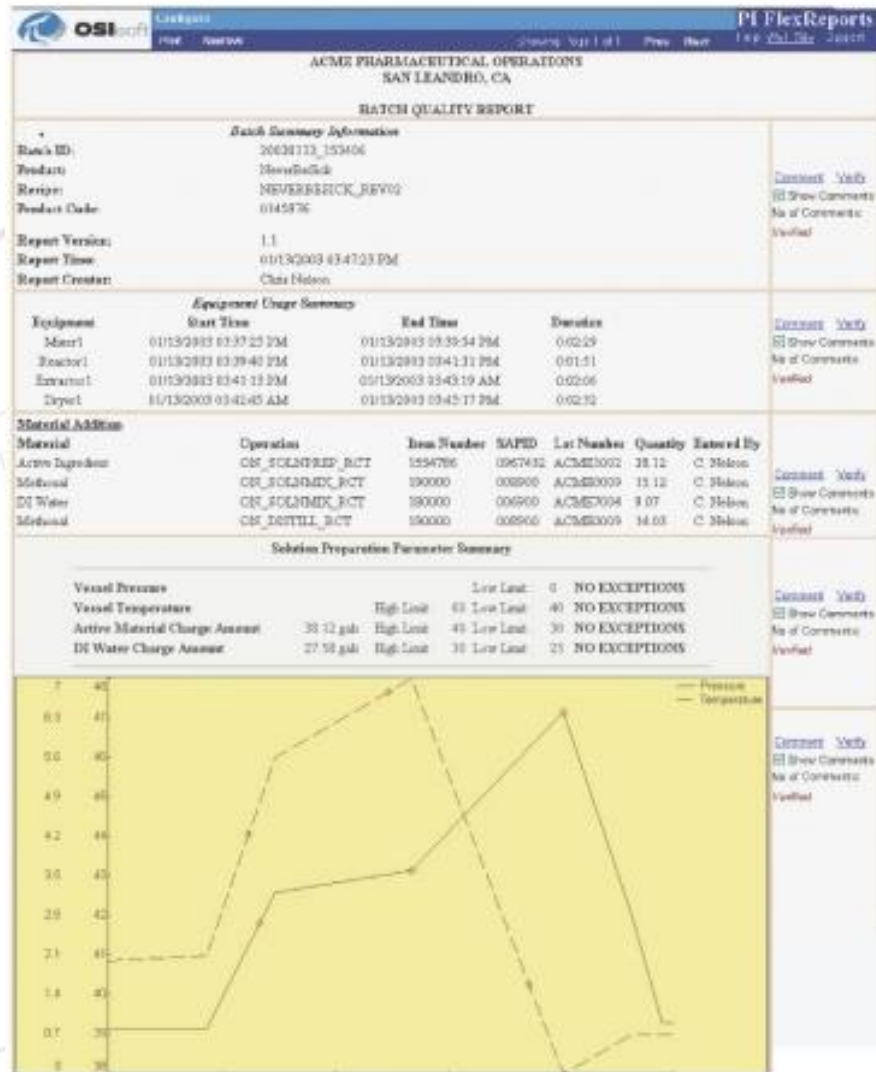
ProcessBook: Datasheet Control



PI BatchView: Batch Comparisons



RtReports: Rule-based Exception Reporting



PI Datalink: Process Analysis

Microsoft Excel - Demo 2.xls

File Edit View Insert Format Tools Data Window PI PI-SMT Help

Type a question for help

fx {=PITimeDat(\$E\$7,\$C\$10:\$C\$50,"OSIPLM001")}

Quality vs. Process Analysis

Get Data Clear OSIPLM001

Unit: ROUNIT Product: * Process: Temperature

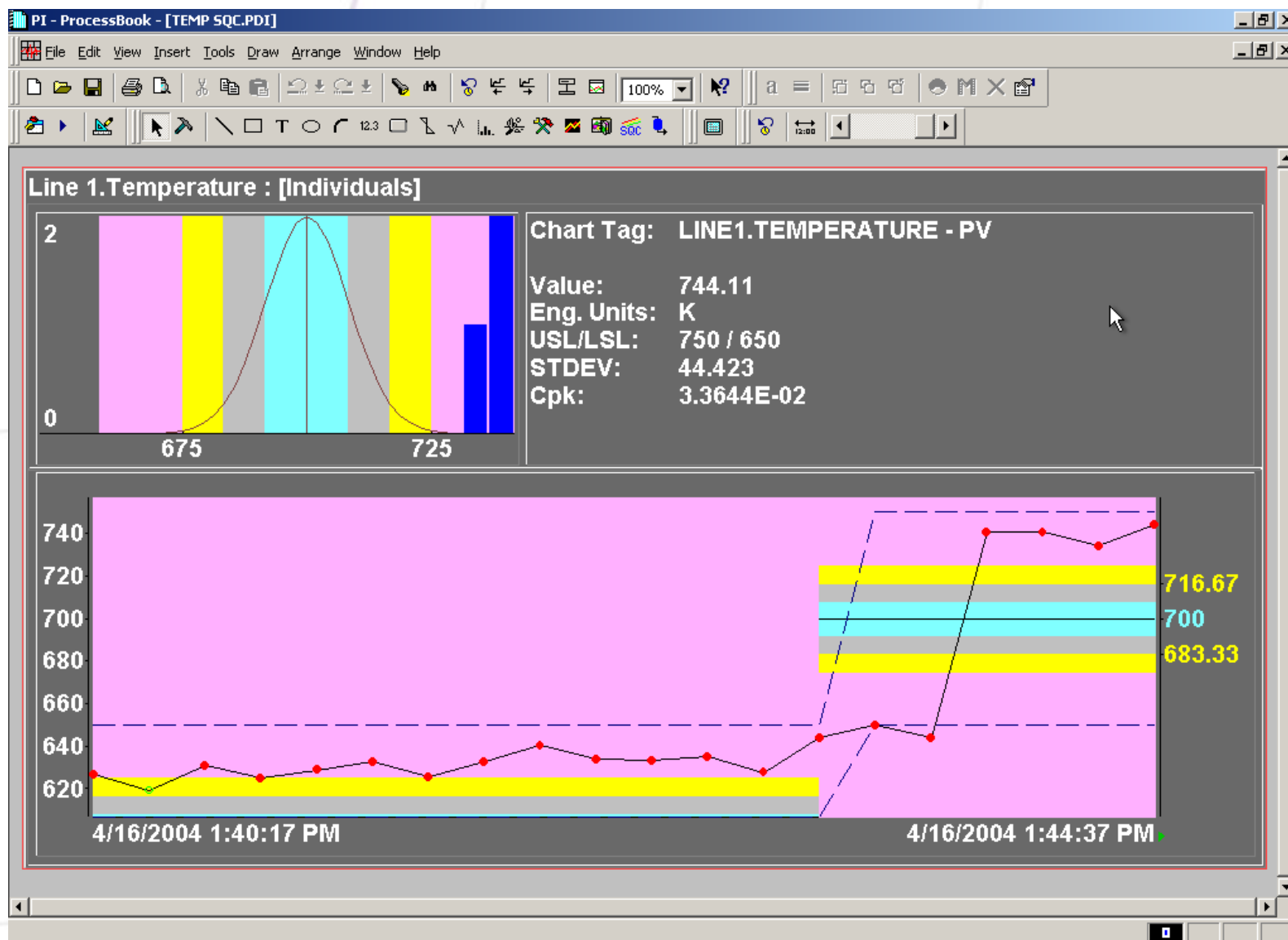
Between: * and: *-1 Day Quality: Melting Point

| Batch Data | | | | Process Variable | | | Quality Variable | | |
|------------|---------|------------|-----------------|------------------|-----|-------------|------------------|-----|---------------|
| ID | PRODUCT | START TIME | END TIME | High | Low | Temperature | High | Low | Melting Point |
| 10 | CC024 | DL10011847 | 4/16/2004 11:03 | 625 | 575 | 636.4 | 659 | 600 | 820.0 |
| 11 | CC023 | DL10011849 | 4/16/2004 10:23 | 600 | 550 | 607.7 | 850 | 800 | 741.7 |
| 12 | CC022 | DL10011845 | 4/16/2004 9:43 | 725 | 675 | 733.8 | 550 | 500 | 503.0 |
| 13 | CC021 | DL10011847 | 4/16/2004 9:03 | 625 | 575 | 635.7 | 659 | 600 | 591.1 |
| 14 | CC020 | DL10011849 | 4/16/2004 8:23 | 600 | 550 | 610.7 | 850 | 800 | 854.0 |
| 15 | CC019 | DL10011845 | 4/16/2004 7:43 | 725 | 675 | 734.6 | 550 | 500 | 521.7 |
| 16 | CC018 | DL10011847 | 4/16/2004 7:03 | 625 | 575 | 633.6 | 659 | 600 | 690.4 |
| 17 | CC017 | DL10011849 | 4/16/2004 6:23 | 600 | 550 | 609.8 | 850 | 800 | 877.1 |
| 18 | CC016 | DL10011845 | 4/16/2004 5:43 | 725 | 675 | 735.8 | 550 | 500 | 573.8 |
| 19 | CC015 | DL10011847 | 4/16/2004 5:03 | 625 | 575 | 636.4 | 659 | 600 | 554.9 |
| 20 | CC014 | DL10011849 | 4/16/2004 4:23 | 600 | 550 | 608.5 | 850 | 800 | 844.3 |
| 21 | CC013 | DL10011845 | 4/16/2004 3:43 | 725 | 675 | 735.1 | 550 | 500 | 553.7 |
| 22 | CC012 | DL10011847 | 4/16/2004 3:03 | 625 | 575 | 633.7 | 659 | 600 | 613.1 |
| 23 | CC011 | DL10011849 | 4/16/2004 2:23 | 600 | 550 | 609.4 | 850 | 800 | 843.5 |
| 24 | CC010 | DL10011845 | 4/16/2004 1:43 | 725 | 675 | 735.6 | 550 | 500 | 488.5 |
| 25 | CC009 | DL10011847 | 4/16/2004 1:03 | 625 | 575 | 635.0 | 659 | 600 | 576.2 |
| 26 | CC008 | DL10011849 | 4/16/2004 0:23 | 600 | 550 | 611.4 | 850 | 800 | 805.4 |
| 27 | CC007 | DL10011845 | 4/15/2004 23:43 | 725 | 675 | 734.4 | 550 | 500 | 517.6 |
| 28 | CC006 | DL10011847 | 4/15/2004 23:03 | 625 | 575 | 636.3 | 659 | 600 | 598.2 |
| 29 | CC005 | DL10011849 | 4/15/2004 22:23 | 600 | 550 | 610.7 | 850 | 800 | 749.0 |
| 30 | CC004 | DL10011845 | 4/15/2004 21:43 | 725 | 675 | 735.8 | 550 | 500 | 505.5 |
| 31 | CC003 | DL10011847 | 4/15/2004 21:03 | 625 | 575 | 634.6 | 659 | 600 | 654.1 |
| 32 | CC002 | DL10011849 | 4/15/2004 20:23 | 600 | 550 | 611.0 | 850 | 800 | 827.7 |
| 33 | CC001 | DL10011845 | 4/15/2004 19:43 | 725 | 675 | 734.0 | 550 | 500 | 546.9 |

BatchReport Selections Recipe and Report

Ready Calculate

PI SQC: Alarms and SQC Analysis



AlarmView: Alarm Management

PIAlarmView

File Edit Options Actions Help

Priority: 01 23

(localhost)

R0101

| Tagname | AI State | Time | P | Description |
|-----------------------|-----------------|----------------------|---|-------------------------------|
| R0101_Temperature | OutsideControl | 4/16/2004 1:31:47 PM | 2 | R0101 Line 1 Temperature |
| R0101_Toluene% | OutsideControl | 4/16/2004 1:04:57 PM | 3 | R0101 Line 1 Toluene % |
| R0101_Agitator_Amps | OutsideOneSigma | 4/16/2004 1:32:47 PM | 3 | R0101 Line 1 Agitator Amps |
| R0101_Conductivity | OutsideOneSigma | 4/16/2004 1:32:47 PM | 2 | R0101 Line 1 Conductivity |
| R0101_Level | OutsideControl | 4/16/2004 1:32:47 PM | 1 | R0101 Line 1 Level |
| R0101_Specific_Gravit | OutsideControl | 4/16/2004 1:32:47 PM | 2 | R0101 Line 1 Specific Gravity |

| Tagname | Serve | Descriptor | P | AI State | Time | Ack'ed |
|-------------------|--------|--------------------------|---|-----------------------|------|-----------------------|
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:24:37 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:26:27 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:26:37 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:26:47 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:26:57 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:27:17 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:27:27 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:27:47 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:28:07 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:29:07 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:29:17 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:29:47 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:29:57 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:30:17 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:30:27 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:31:47 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:31:57 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:32:17 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:32:27 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:34:27 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideControl - ACK | | 4/16/2004 10:34:37 AM |
| R0101_Temperature | localF | R0101 Line 1 Temperature | 2 | OutsideTwoSigma - ACK | | 4/16/2004 10:37:07 AM |

The Alarm limits are automatically updated by the ProcessPoint COM Connector.

Summary

- ProcessPoint provides Product Data Management
 - Process Specifications
 - Product Specifications
- Dow Reichhold Business Example
 - Company wide initiative
 - Managed material and product information
 - Managed from R&D through to manufacturing
- RtPM Integration
 - Supplies the intended process values
 - Tag targets and limits across many PI clients

