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Workflow Administration User Guide

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Agile Product Lifecycle Management for Process Workflow Administration User Guide, Release 6.2.1

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Preface

The *Agile Product Lifecycle Management for Process Workflow Administration User Guide* contains instructions for managing workflows in Agile Product Lifecycle Management (PLM) for Process.

This preface contains these topics:

- Audience
- Variability of Installations
- Documentation Accessibility
- Software Availability
- Related Documents
- Conventions

Audience

This user guide is intended for Agile PLM for Process workflow administrators.

Variability of Installations

Descriptions and illustrations of the Agile PLM for Process user interface included in this manual may not match your installation. The user interface of Agile PLM for Process applications and the features included can vary greatly depending on such variables as:

- Which applications your organization has purchased and installed
- Configuration settings that may turn features off or on
- Customization specific to your organization
- Security settings as they apply to the system and your user account

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or

visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Software Availability

Oracle Software Delivery Cloud (OSDC) provides the latest copy of the core software. Note the core software does not include all patches and hot fixes. Access OSDC at:

http://edelivery.oracle.com.

Related Documents

For more information, see the following documents in the Agile PLM for Process documentation set:

- *Agile Product Lifecycle Management for Process User Group Management User Guide*
- *Agile Product Lifecycle Management for Process Administration User Guide*
- *Agile Product Lifecycle Management for Process Global Specification Management User Guide*
- *Agile Product Lifecycle Management for Process Supply Chain Relationship Management User Guide*
- *Agile Product Lifecycle Management for Process eQuestionnaire User Guide*
- *Agile Product Lifecycle Management for Process Document Reference Library User Guide*
- *Agile Product Lifecycle Management for Process Content Synchronization and Syndication User Guide*
- *Agile Product Lifecycle Management for Process Supplier Portal User Guide*
- *Agile Product Lifecycle Management for Process New Product Development User Guide*
- *Agile Product Lifecycle Management for Process Product Quality Management User Guide*
- *Agile Product Lifecycle Management for Process Extensibility Guide*
- *Agile Product Lifecycle Management for Process Security Configuration Guide*
- *Agile Product Lifecycle Management for Process Release Notes*. Up-to-date Release Notes and other documentation are posted on Oracle Technology Network (OTN) at this location:

  http://www.oracle.com/technetwork/documentation/agile-085940.html#plmprocess

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introducing Workflow Administration

This chapter introduces the key responsibilities of an Agile Product Lifecycle Management for Process workflow administrator. This chapter includes the following topic:

- Introducing Workflows
- Introducing Workflows
- Searching for Workflows
- Editing Workflow Process Templates
- Copying Workflow Process Templates
- Exporting and Importing Workflows

Introducing Workflows

A workflow is the automation of a business process, in whole or part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules. In Agile PLM for Process, workflows are managed using the WFA (Workflow Administration) application.

Workflow Administration Overview

As an Agile PLM for Process administrator, you can perform workflow management duties using the Workflow Administration (WFA) application in Agile PLM for Process. In managing workflows, you create and edit workflow process templates. This task involves creating workflow statuses, transitions, owners, signature requests, and notifications.

For details, see:

Chapter 2, "Using WFA to Create GSM Workflows"

Chapter 3, "Using WFA to Create SCRM Workflows"

Chapter 4, "Using WFA to Create PQM Workflows"

Chapter 5, "Using WFA to Manage CSS Workflows"

For other administrative duties, see the *Agile Product Lifecycle Management for Process User Group Management Guide* and the *Agile Product Lifecycle Management for Process Administrator User Guide*.

For general information on using Agile PLM for Process software, see the *Agile Product Lifecycle Management for Process Getting Started Guide*.

Associated Roles

The following user roles are associated with workflows:

[WFA_ADMIN]—Can create, edit, import, and export workflows.

[WFA_USER]—Can access the WFA (Workflow Administration) application and view all workflows.

[WFA_GLOBAL_ADMIN]—Can create and edit workflows.

Workflow Terms and Definitions

The following are important workflow terms and definitions that you must understand in order to perform workflow administration tasks. Note that "business object" refers to GSM specifications, SCRM sourcing approvals, and PQM issues, actions, or audits, or objects to which you can set a workflow

Owner—The person(s) responsible for managing the business object in a particular status. As owner of the workflow, you:

- Receive items in your Action Items list. You are responsible for assuring that the assigned parties perform all necessary actions or reviews.
- Can advance the business object in the workflow process by clicking **Workflow** in the upper right corner of the page.

Author—The person who originally created the business object.

Signature Reviewer—Represents a functional area, group, or individual who is responsible for reviewing information contained within a business object. The signature reviewers approve or disapprove the object through the use of signature documents. This review enables the object to move forward in the workflow process.

Additional Notification—Represents a functional area, group, or individual who receives an email notification that a business object has been moved in the workflow process to a particular status. This role is considered informational only, and additional notification recipients are not responsible for providing any formal response or input into the business object.

Reader—A group or individual who can open a business object and read the contents. You can assign read permissions to groups, individuals, or exclusively the author, owner, and/or signature requestee.

Editor—A group or individual who can open and edit a business object. You can assign editor permissions to groups, individuals, or exclusively to the author, owner, and/or signature requestee.

Workflower—A group or individual who can move a specification from one workflow step to another. You can assign workflow permissions to groups, individuals, or exclusively to the author or signature requestee.

Service Level Agreement (SLA)—The number of days that a document will remain in a particular status before a reminder indicator changes. The system issues an amber reminder that a deadline is approaching and a red reminder that the deadline has passed.

Transitions—The statuses that a particular step can be transitioned to. Moving a workflow between statuses can mean moving the workflow backward to a previous step or forward to the next step. Transitions can be serial (one back and one forward) or can allow for expedition (from any status to any other status).

Condition—A rule that has to be met before a particular action is applied. Conditions can be assigned to transitions, owners, signature requests, notifications, and the workflower permission tables.

Guard Conditions—An extensibility point that helps determine if a workflow transition can occur.

Workflow Action—An extensibility point that triggers the execution of classes when a workflow transition occurs. The classes can access the item being workflowed to execute specialized actions programmatically.

Recommendations for Creating Workflows

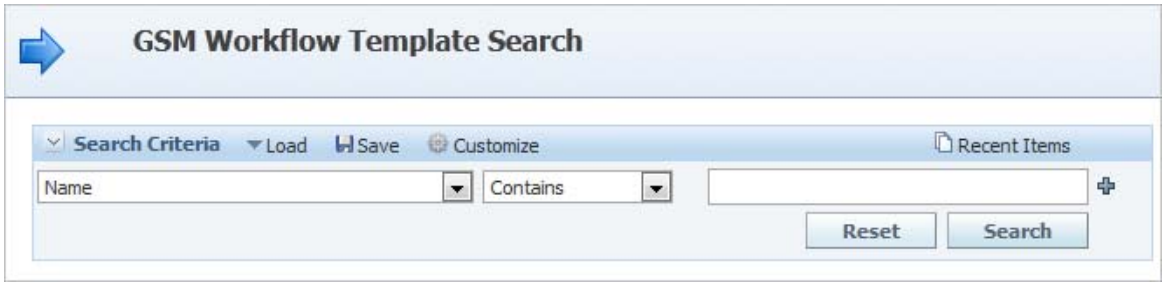
The following are recommendations for creating workflows using the WFA (Workflow Administration) application in Agile PLM for Process.

- A workflow should contain a relatively small number of created statuses. These statuses should be common and applicable across all workflows. For example, consider using a workflow that progresses through the following intuitive statuses: Draft > Working > Approved > Inactive > Retired.
- When creating workflows in the WFA application, always check the **Terminate Workflow at This Step** check box to indicate the last step in the workflow.
- Deprecate workflow steps by clicking **Make Inactive**. Changing a step to inactive status assures that existing specifications already in that step can continue in the workflow but that no new specifications can enter that step.
- If a step has owners, signature documents, and/or notifications, be sure to provide functional areas for each.
- Principals are required for each permission rule.
- When setting up conditions containing multiple rows, be aware that conditions inside the same row indicate "Or" values and that conditions in different rows represent "And" values.

Searching for Workflows

When you first access the WFA application, you see the GSM Workflow Template Search page, shown in Figure 1–1.

Figure 1–1 GSM Workflow Template Search page



As an administrator, you often search for workflow process templates. The method of searching for GSM, SCRM, PQM, and CSS workflows is the same.

To search for workflows:

1. In the key field drop-down list, select your search criteria as follows:

- **All (--)**—Searches for all workflows
- **Description**—Searches for workflows by description
- **Name**—Searches for workflows by name
- **Most Recently Used**—Searches for the most recently used workflows

2. In the operator drop-down list, your options will be determined by the choice that you made in the first drop-down list. Selections may include:
   - **Null {empty field}**—Searches for all workflows
   - **Contains**—Used for character searches, alphabetical or numerical (for example, "Name Contains Ingredient" will result in only GSM workflow templates with names containing the word "Ingredient")
   - **Ends With**—Used for character searches, alphabetical or numerical (for example, "Description Name Ends With 14" will result in only workflow templates with descriptions that end with the number "14")
   - **Equals**—Used to evaluate search criteria entered in the field to the right (for example, "Name Equals Dairy Ingredient" will result in only workflow templates with this exact name)
   - **Starts With**—Used for character searches, alphabetical or numerical (for example, "Description Name Starts With K" will result in only workflow templates with descriptions that start with the letter "K")
   - **Is True**—Searches for workflows matching your selection. Used with Most Recently Used criterion
3. Use the third search criteria field to qualify the selections you made in the first two drop-down lists. You can also enter the percent (%) sign to perform a wildcard search matching any one character.
4. Click **Search** to display workflow templates matching the search criteria.

Editing Workflow Process Templates

To edit a workflow process template:

1. Use the search tool to locate the existing workflow process template to edit. See "Searching for Workflows" on page 1-3.
2. Click **Edit** in the action menu. The workflow process template displays with editable fields.
3. Make edits to the workflow process template as described in Chapter 2, Chapter 3, Chapter 4, and Chapter 5.
4. Click **Save & Close**.
5. Flush the workflow cache group, as described in Chapter 6, "Reference Cache".

Using the Make Inactive Option

You can make certain steps of the workflow process template inactive by clicking **Make Inactive**, located to the right of applicable sections.

Further, you can remove inactive sections from your view by clicking **Toggle Inactive** in the action menu. This option removes inactive sections from your view but does not remove them from the workflow process template altogether.

Copying Workflow Process Templates

If you need to create a workflow process template that is very similar to an existing workflow process template, you may wish to use the copy feature of the WFA application. You can copy the existing workflow, save it as a new template, and edit that template.

To copy an existing workflow and use it as a basis for a new, similar workflow:

1. Use the search page to locate the existing workflow process template to copy. See "Searching for Workflows" on page 1-3.
2. Click **Copy** in the action menu. A copy of the workflow process template with editable fields is presented.
3. The words "Copy of" are added to the original workflow process template name. Change the name of the workflow process template.
4. Make additional edits to the workflow process template as needed using instructions provided in Chapter 2, Chapter 3, Chapter 4, and Chapter 5.
5. Click **Save & Close**.
6. Flush the workflow cache group, as described in Chapter 6, "Reference Cache".

Exporting and Importing Workflows

As an administrator, you perform workflow creation and editing tasks in a staging environment. Once you have made final changes to workflows in the staging environment and they are ready to go live in the production environment, you must export them out of the staging environment and import them into the production environment.

Exporting Workflows from Your Staging Environment

To export workflow data from your staging environment:

1. Before exporting a workflow, make sure you have flushed the workflow cache group, as described in Chapter 6, "Reference Cache".
2. Start a new Agile PLM for Process session prior to exporting a workflow from staging to production.
3. Click **WFA** on the left navigation panel.
4. Locate the workflow process template to export.
5. Click **Export** in the action menu. A File Download dialog box displays.
6. Select the location on your hard drive to temporarily export the data.
7. Click **Save**. Agile PLM for Process encrypts the data and saves the encrypted file to your local drive.

Importing Workflows into Your Production Environment

To import workflow data into your production environment:

1. Log in to your production environment.
2. Access **WFA**.
3. Click the **Import** in the action menu.
4. Click **Browse** to locate the encrypted file that you exported from the staging environment and select the file.
5. Click the **Import** in the action menu.
6. Flush the workflow cache group, as described in "Reference Cache" on page 6-1.

2

Using WFA to Create GSM Workflows

This chapter contains instructions for using the Workflow Administration (WFA) application to create workflows in Global Specification Management (GSM). Topics in this chapter include:

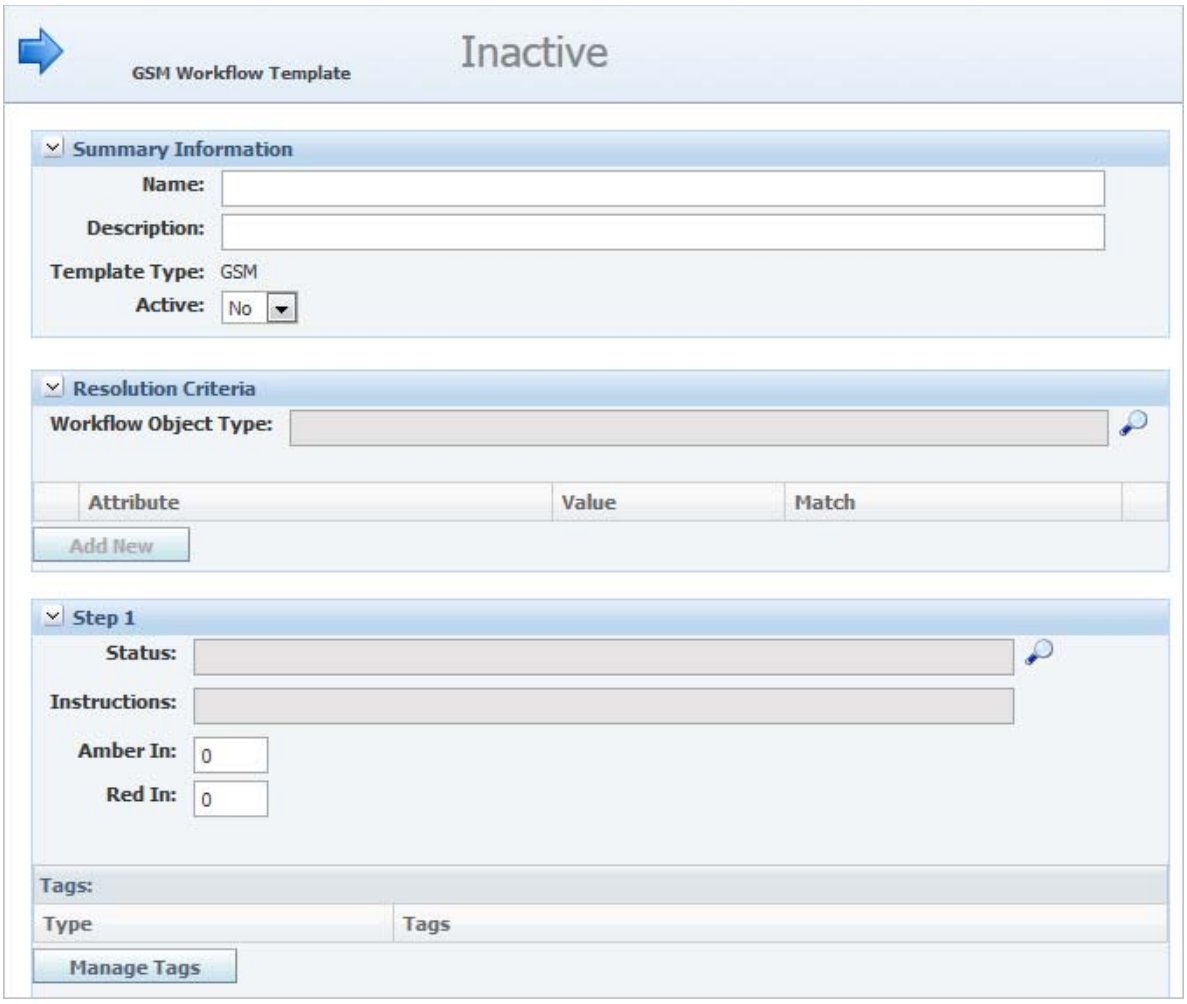
- Creating New GSM Workflow Templates

Creating New GSM Workflow Templates

To create a new GSM workflow template:

1. Click **WFA** on the left navigation panel.
2. Click **New > GSM Workflow Template** in the action menu. Agile PLM for Process displays a new workflow template page, as shown in Figure 2–1.

Figure 2–1 GSM Workflow Template page



3. Enter information described in:
   - "Summary Information Section" on page 2-2
   - "Resolution Criteria Section" on page 2-3
   - "Step Sections" on page 2-5
   - "Permissions Section" on page 2-21
   - "Workflow Permissions Section" on page 2-23
4. Click **Save & Close**.
5. Flush the Workflow Cache Group, as described in Chapter 6, "Reference Cache".

Summary Information Section

Enter the following workflow information in the Summary Information section:

Name Enter a unique name for the workflow. This name will appear to the GSM user when resolving a specification to a workflow. It is also shown on a specification as the Current Workflow value on the Approval/Audit Trail tab. This is a required field.

Description Enter a description for the workflow. This description will appear to the GSM user when resolving a specification to a workflow. This is a required field.

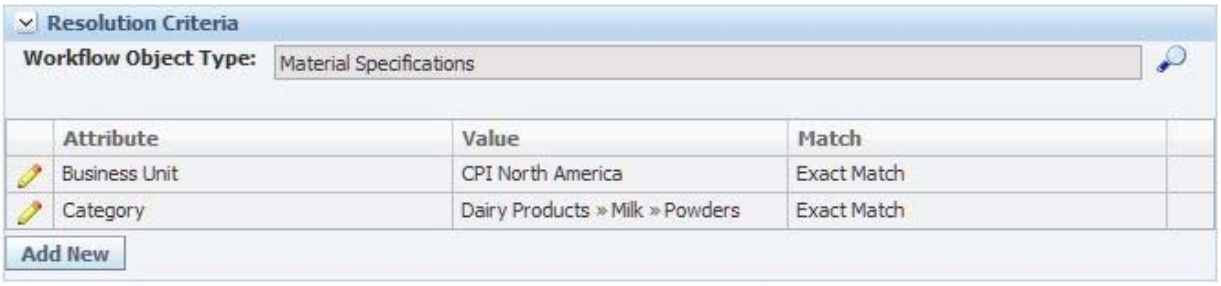
Template Type This field represents the type of workflow template. There are four types of workflows: GSM, SCRM, PQM and CSS.

Active Select **Yes** to make the template active when the workflow template is ready to become available for use in Agile PLM for Process. Otherwise, the template will remain inactive and not available for general use.

Resolution Criteria Section

Resolution criteria are the rules that determine what workflow template the GSM specification will resolve to. For example, all material specifications with the business unit of North America and the specification category of Dairy Products > Milk > Powders should resolve to this workflow template.

Figure 2–2 Resolution Criteria section



Note: Once a specification has resolved to a workflow, users with the role of [CAN_RERESOLVE_WORKFLOWS] can re-resolve the specification to a different workflow in GSM.

Enter the following workflow information in the Resolution Criteria section:

Workflow Object Type To assign a **Workflow Object Type**, click the search icon to display a dialog box of workflow object types. Select the workflow object type (Material Specification, Trade Specification, and so on) that will consume this workflow process template. This is a one-to-one relationship between the template and object type; only one selection is allowed. This is a required field.

Attribute You can also add resolution criteria attributes, by clicking **Add New** and selecting the attribute from the dialog box. Resolution criteria attributes available will depend on the workflow object selected.

The following attributes are available:

- **Business Unit**— Select this attribute to evaluate the business unit on the specification during resolution.
- **Category**—Select this attribute to evaluate the specification category on the specification during resolution.
- **Classification**—Select this attribute to evaluate the classification on the specification during resolution. If enabled, this attribute is only available for

the material specification object type. When this is configured on, the classification field on the material specification will be required.

- **Segment**—Select this attribute to evaluation the business segment on the specification during resolution.
- **Is Template**—Select this attribute to evaluate whether the specification is a template during resolution.

Value Click the edit icon to place the row in edit mode. Click the add data icon to display a selection list of the attribute added. Select the value to evaluate, then click **Done**.

Match Make a selection as follows:

- **Exact Match**—The values must match exactly
- **Hierarchy**—The values must be related hierarchically (the match moves up and down the hierarchy)
- **+ Children**—The values must be related hierarchically (the match moves down the hierarchy only)
- **Resolution Affinity**—The workflow with the closest affinity will be selected. If multiple matches are found the user will be presented with a selection option.

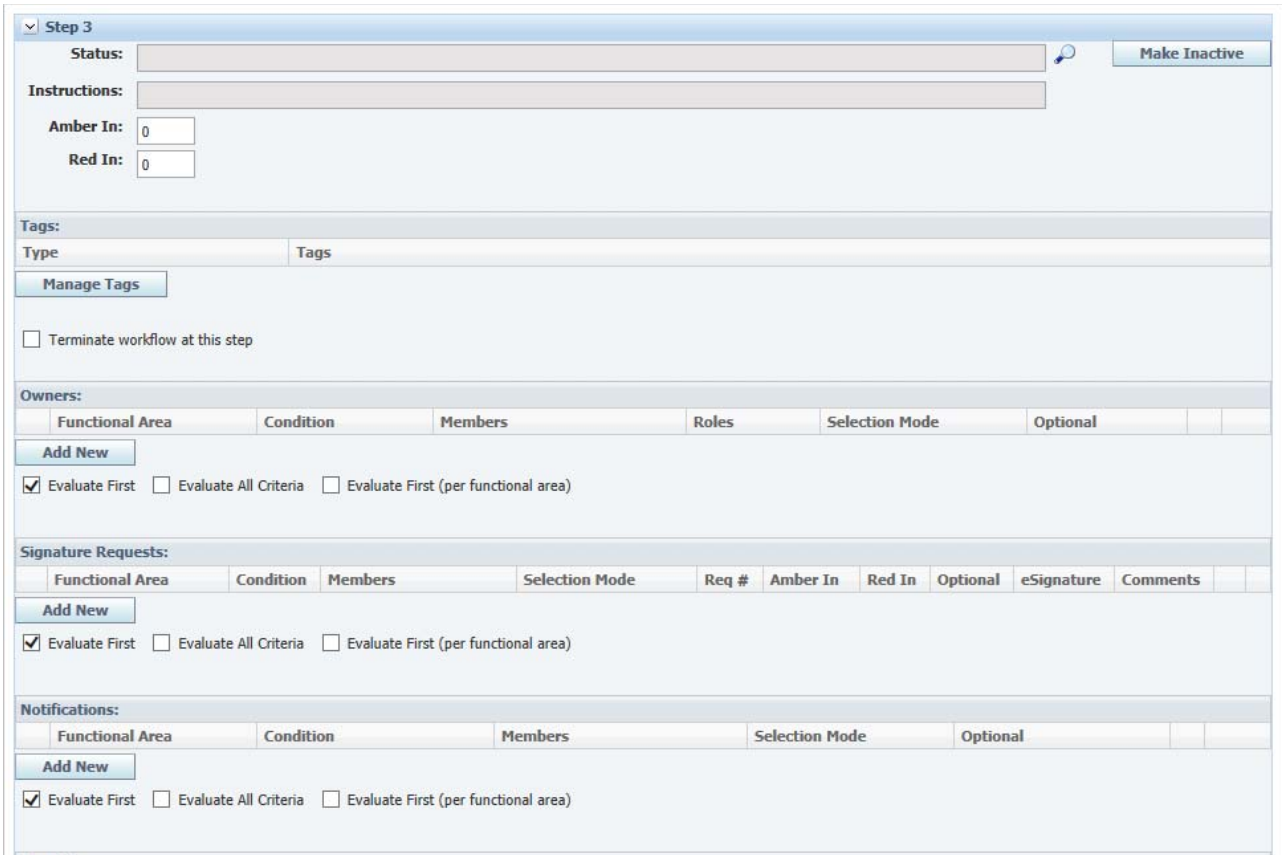
Note: Attribute values in the same row will represent an OR statement. For example, if the specification business unit equals "USA" or "Canada" it will resolve to this template.

Attribute values in different rows represent an AND statement. For example, the specification must have a business unit of "USA" and a specification category value of "Dairy > Milk > Powders."

Step Sections

Each workflow template must have a minimum of two steps, as represented in the Step 1 and Step 2 sections. You can add more step sections by clicking **Add New Step**. By default, Step 2 is set as the last step in the workflow. Un-check the "Terminate workflow at this step" box as needed.

Figure 2–3 Steps sections



To define steps:

1. Define the **Status** by click the search icon. A Select Status dialog box displays. You can choose from a list of existing statuses or click **Add New** to create a new status and name it. Workflow process templates contain only a small number of statuses, since statuses, once created, are permanent.

   Note: Give each status a unique status name. Status names should also be common and applicable across all workflows. Status names cannot be changed once the template is activated.

2. The **Instructions** field is populated with the instructions attached to the chosen status. If you create a new status, enter a new set of instructions for this field.
3. In the **Amber In** field, enter the number of days until this workflow step displays in amber, indicating that the deadline is approaching. This field displays in all steps except the terminal step.
4. In the **Red In** field, enter the number of days until this workflow step displays in red, indicating that the deadline has passed. This field displays in all steps except the terminal step.
5. Click **Manage Tags** to tie tags to this step using the tags dialog box. Tags are a list of specialized functions. Using tags, you can attach predetermined behaviors to workflow steps. Administrators create and manage system actions using the ADMN>WFA>Tags option. See the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information. Available choices are:
   - **Designable**—When a formulation specification reaches a step with this tag, design tools will appear. For more information, see the Formulation Specification chapter in the *Agile Product Lifecycle Management for Process Global Specification Management User Guide*.
   - **Hide Specs**—This action will hide the specifications tied to this step when a search is performed in GSM. This is a valuable action for specifications that are archived and should no longer be referenced. The HIDDEN_SPEC_VIEWER role enables the Show Hidden Specs checkbox in Profile and Preferences. To search for hidden specifications the Show Hidden Specs checkbox must be enabled.
   - **Initial Load**—This tag will be used to interact with future APIs. This tag currently does not define any system behavior.
   - **Is Approved**—This tag is used to specify that the specification is in an approved state.
   - **Is Developmental**—This tag is used to specify that the specification is a developmental state.
   - **Publish Template**—When a specification or object template reaches a step with this tag, the user will be able to create an instance from this template.
   - **Publish to Supplier Portal**—This action will publish the specifications tied to this step to the Supplier Portal. This is a valuable feature for publishing only approved specifications to your suppliers.

Visibility tags can also be added here. See "Controlling Visibility Using Tags" on page A-1 for more information.

6. If needed, check **Terminate workflow at this step** box to end the workflow at this step. This setting indicates that no further steps are required.
7. Click **Save**. If needed, add more steps by clicking **Add New Step** and repeating this procedure.

Owners Table

Use the Owners table to designate the person(s) responsible for managing the specification. An owner of the workflow:

- Will receive items in their Action Items list
- Can advance the specification in the workflow process by clicking **Workflow** in the upper right corner of the specification page

Figure 2–4 shows the Owners table.

Figure 2–4 Owners table



Note: You cannot set owners on the first and terminal steps.

To add an owner:

1. Click **Add New** to create a new owner's row.
2. Define the owner by **Functional Area**, **Condition**, **Members**, **Roles**, **Selection Mode**, **Optional**, and **Evaluation Method** as described below and ending on page 2-10.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will be assigned ownership. This value could be used for evaluation order, as described in "Evaluation Methods" on page 2-10. This value will also be used to organize groups of owners available for a user's selection during the workflow transition. Administrators create and manage functional areas using the ADMN>WFA>Functional Area (WFA) option. See "Functional Area - (WFA) in the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information.

Conditions There may be times when "who owns what" will differ based on specific specification attributes.

Conditions added to an owner row must be met in order for that group or individual to be the owner or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

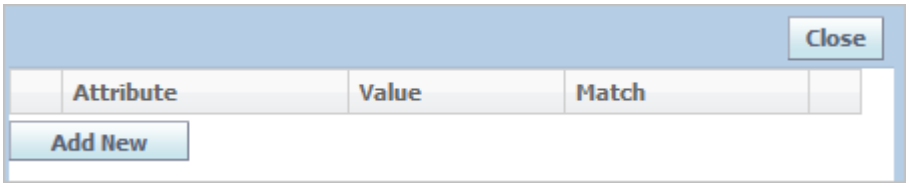
- **Additives**—The additive values on the specification.
- **Allergens**—The allergen values on the specification.
- **Business Unit**—The business unit value on the specification.
- **Classification**—The classification value on the specification. (This only applies to material specification workflow objects)
- **Complies With**—The Complies With value on the specification.
- **Country**—The country value on the specification.
- **Menu Item Class**—Evaluates the menu item class value on the specification. (This only applies to menu item specifications)
- **Segment**—The business segment value on the specification.
- **Standard**—Evaluates the standard value on the specification. (This only applies to menu item specifications and product specifications)
- **Category**—The specification category on the specification.

Multiple conditions can be used to model more complex ownership requirements. For example, if the specification has the allergen of gluten and has the business unit of North America, then the specification is owned by these members.

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as shown in Figure 2–5.

Figure 2–5 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the Value column.
6. Select an option from the **Match** drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Select the users or groups who will be assigned ownership. Click **Edit Users** to locate individual users, and click **Edit Groups** to locate groups that will be used when assigning ownership.

To add users as members:

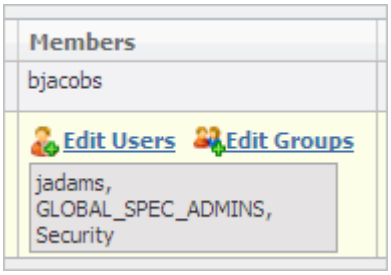
1. With the row in edit mode, click **Edit Users**. The user search page is displayed with "Last Name" and "Starts With" default search criteria.
2. Enter the user's last name in the third search criteria field.

3. Click **Search**. User names matching the information you provided are listed in the Search Results section.
4. Click the user name. It displays in the Selected Items section.
5. Repeat step 2 through step 4 to select other users.
6. Click **Done**. The users are added to the Members column.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

To add user groups as members:

1. With the row in edit mode, click **Edit Groups**. The groups dialog box is displayed.
2. Check the groups to add as members.
3. Click **Done**. The groups are added to the Members column, as Figure 2–6 shows.

Figure 2–6 Selected members



4. Click the apply changes icon to apply your changes.
5. Click **Save**.

To delete users:

1. With the row in edit mode, click **Edit Users**. The user search page displays.
2. In the Selected Items section, click the user to delete, then click **Done**. The user that you selected is removed from the Members column.
3. Repeat steps 1 and 2 to delete additional users.
4. Click **Save**.

To delete user groups:

1. With the row in edit mode, click **Edit Groups**. The group dialog box displays.
2. Un-check the groups to delete.
3. Click **Done**. The dialog box closes. The groups that you selected are removed from the Members column.
4. Click **Save**.

Roles You can designate the author of the specification as the owner by selecting the value of "Author."

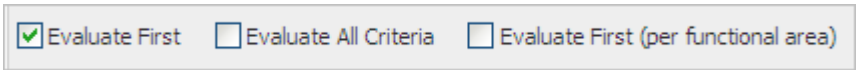
Selection Modes A user moving a specification to the next workflow step could have the opportunity to select an owner. Selections will be organized for the user by functional area. Selection Mode allows you to control this process. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to select only one member.
- **Multiple Members** —Choose this mode to allow the workflower to select multiple members.

Optional Select this checkbox to make the workflower's selection optional.

Evaluation Methods

Figure 2–7 Evaluation method options



Below the table are evaluation method options. These selections will tell WFA how to evaluate the owners table.

- **Evaluate First**—Evaluates each row in order and uses the first row where the conditions are met, ignoring all other rows
- **Evaluate All Criteria**—Evaluates all rows and executes all that apply (provide a union set)
- **Evaluate First (per functional area)**—Groups rows by functional area, evaluates rows in order, executes the first one that applies, then skips to the next functional area (ignoring any remaining rows from the original functional area)

Signature Requests Table

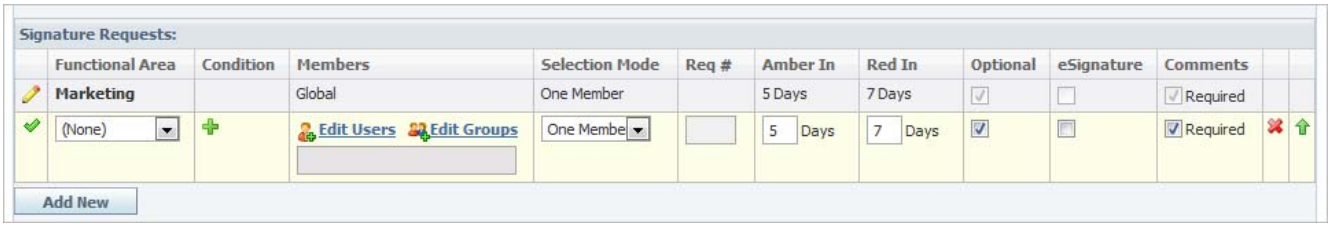
Use the Signature Requests table to assign signature reviewers. Signature requestees represent a functional area, group, or individual who is responsible for reviewing information contained within a specification. The signature requestee approves or disapproves the specification through the use of signature documents. This review enables the specification to move forward in the workflow process. You can also set whether authentication is required using the eSignature checkbox.

You can designate a minimum number of "Approved" signature documents required in order to workflow GSM objects forward in the workflow process. For example, you can now configure WFA to send a single signature request to multiple users within a group, and once a single user "Approves" a signature request and no user "Not Approves" a signature request, the workflow may proceed without "Approval" of the remaining signature requests.

If multiple signature documents have been issued for a specifications, the owner is sent an email notification as soon as one of the signature documents have been workflowed to "Not Approved". The workflow owner should be sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

The owner of a signature request can workflow the specification to a prior step regardless of whether all signature request have been approved or disapproved by requestees. Figure 2–8 shows the Signature Requests table.

Figure 2–8 Signature Requests table



Note: You cannot assign signature requestees on the first and terminal steps.

To add signature requestees:

1. With the page in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the **Functional Area**, **Condition**, **Members**, **Selection Mode**, **Req #**, **Amber In**, **Red In**, **Optional**, and **eSignature** fields as described below and ending on page 2-10.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Use this field to select the functional area for users or groups who will receive signature requests. This value could be used for evaluation order. This value will also be used to organize the GSM user's workflow selections. See "Evaluation Methods" on page 2-10 for more information.

Conditions There may be times when who you require a signature document from will differ based on specific specification attributes.

Conditions added to a row must be met in order for that group or individual to be a signature requestee and/or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

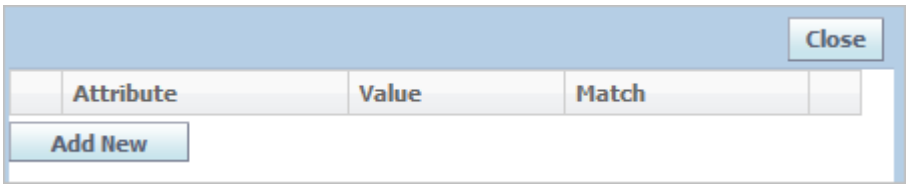
- **Additives**—The additive values on the specification.
- **Allergens**—The allergen values on the specification.
- **Business Unit**—The business unit value on the specification.
- **Category**—The specification category on the specification.
- **Classification**—The classification value on the specification. (This only applies to material specification workflow objects)
- **Complies With**—The Complies With value on the specification.
- **Country**—The country value on the specification.
- **Menu Item Class**—Evaluates the menu item class value on the specification. (This only applies to menu item specifications)
- **Segment**—The business segment on the specification.
- **Standard**—Evaluates the standard value on the specification. (This only applies to menu item specifications and product specifications)

Multiple conditions can be used to model more complex requirements. For example, if the specification has the allergen of gluten and has the business unit of "North America," then the specification needs to be reviewed by the selected members.

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 2–9 shows.

Figure 2–9 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the Conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the **Value** column.
6. Select an option from the **Match** drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Use this field to select the users or groups who will be assigned as signature requestees. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will receive signature requests.

To add users and user groups as members, refer to the procedures on "To add users as members:" on page 2-8 and "To add user groups as members:" on page 2-9.

Selection Modes A user who is moving a specification to the next workflow step could have the opportunity to select an owner. The Selection Mode field allows you to control this process. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Req # Use this field to designate a number of approved signature documents required in order to workflow GSM objects forward in the workflow process. For example, if you want three people from the group "Nutrition" to provide an approved signature and it doesn't matter which three people from the Nutrition group provide the approvals, you would add the "Nutrition" group to the Members column, select **All Members** in the Selection Mode column, then enter **3** in the "Req #" field.

You can also select **Multiple Members** in the Selection Mode column. This selection will allow the user who is workflowing the specification to select a sub set of users

who could possibly approve the specification. For example, assume you have 20 users in the Nutrition group and you only need 3 of them to sign off. You may not want all members of the nutrition group to be solicited. So when the user is workflowing the specification they can select 10 specific users out of the group, however only 3 will be required to sign off.

Select Blank or any integer for 1 to 99. The default value is Blank. If you select blank, it works same as previous, which means all selected signature requestee need to approve the request before the user can workflow forward. This field is activated when you have selected “All Members” and "Multiple Members" for the Selection Mode.

Amber In and Red In Options

- **Amber In**—Enter the number of days until the signature request displays in amber, indicating that the deadline is approaching.
- **Red In**—Enter the number of days until the signature request displays in red, indicating that the deadline has passed.

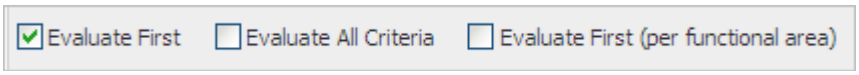
Optional Select this check box to make the workflower’s selection optional.

eSignature Select this check box to indicate eSignature authentication is required. When this is selected, users are required to re-authenticate before being allowed to workflow signature requests to approved. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Comments This field indicates whether comments are required to workflow to the next step or back one step. By default it is selected.

Evaluation Methods

Figure 2–10 Evaluation method options



Below the table are evaluation method options. These selections tell WFA how to evaluate the owners table.

- **Evaluate First**—Evaluates each row in order and use the first row where the conditions are met, ignoring all other rows.
- **Evaluate All Criteria**—Evaluates all rows and executes all that apply (provide a union set).
- **Evaluate First (per functional area)**—Groups rows by functional area, evaluates rows in order, executes the first one that applies, then skips to the next functional area (ignoring any remaining rows from the original functional area).

Notifications Table

Use the Notifications table to designate who should be notified during this step. Users or groups designated will receive an email notification that the specification has been moved in the workflow process to a particular step. This role is considered informational only, and additional notification recipients are not responsible for providing any formal response or input into the specification. Figure 2–11 shows the Notifications table.

Figure 2–11 Notifications table



Note: You cannot designate notifications on the first step.

To add notifications:

1. With the row in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the **Functional Area**, **Condition**, **Members**, **Selection Mode**, and **Optional** fields as described below and through on page 2-15.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will receive notifications. This value could be used for evaluation order, as explained in "Evaluation Methods" on page 2-15. This value will also be used to organize the GSM user's workflow selections.

Conditions There may be times when who you want to notify will differ based on specific specification attributes.

Conditions added to a row must be met in order for that group or individual to be notified and/or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

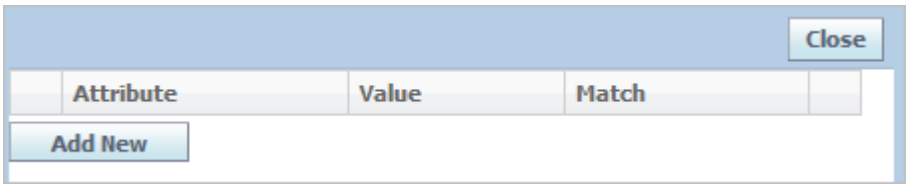
- **Additives**—The additive values on the specification.
- **Allergens**—The allergen values on the specification.
- **Business Unit**—The business unit value on the specification.
- **Category**—The specification category on the specification.
- **Classification**—The classification value on the specification. (This only applies to material specification workflow objects)
- **Complies With**—The Complies With value on the specification.
- **Country**—The country value on the specification.
- **Menu Item Class**—Evaluates the menu item class value on the specification. (This only applies to menu item specifications)
- **Segment**—The business segment on the specification.
- **Standard**—Evaluates the standard value on the specification. (This only applies to menu item specifications and product specifications)

Multiple conditions can be used to model more complex requirements. For example, if the specification has the allergen of gluten and has the business unit of North America, then the selected members should be notified.

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 2–12 shows.

Figure 2–12 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the Value column.
6. Select an option from the **Match** drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Select the users or groups who will be sent notifications. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will receive notifications.

To add users and user groups as members, refer to the procedures "To add users as members:" on page 2-8 and "To add user groups as members:" on page 2-9.

Selection Modes

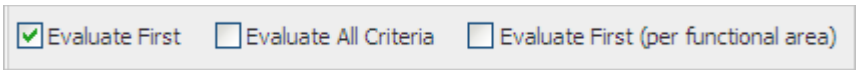
When moving a specification to the next workflow step, users could have the opportunity to select who receives notifications. Selection Mode allows you to control this process. Members displayed for selection will be organized by functional area. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Optional Select this check box to make the workflower's selection optional.

Evaluation Methods

Figure 2–13 Evaluation method options



Below the table are evaluation method options. These selections tell WFA how to evaluate the owners table.

- **Evaluate First**—Evaluates each row in order and use the first row where the conditions are met, ignoring all other rows.
- **Evaluate All Criteria**—Evaluates all rows and execute all that apply (provide a union set).
- **Evaluate First (per functional area)**—Groups rows by functional area, evaluate rows in order, executes the first one that applies, then skip to the next functional area (ignoring any remaining rows from the original functional area).

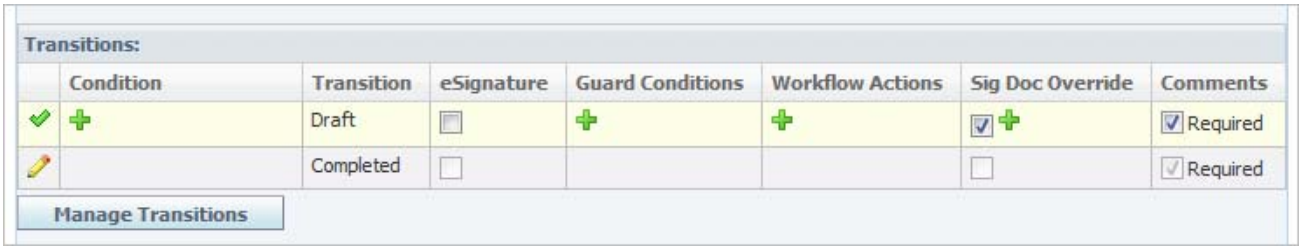
Transitions Table

Transitions answer the question, "Where can I go from here?" This section is used to set up which steps may be available for transition from the current step.

Predefined conditions can be placed on a particular transition to limit its availability based on specific criteria, as described in "Conditions" on page 2-17. Transitions can also be configured with a guard condition extensibility point that can programmatically determine if a workflow transition can occur, as described in "Guard Conditions" on page 2-19. Once the workflow transition does occur, workflow actions can be triggered to execute some process, as described in "Workflow Actions" on page 2-19.

A signature document workflow override is available. Specification owners are now sent an email notification as soon as one signature document has been workflowed to "Not Approved" instead of waiting for all signature documents to be completed. If multiple signature documents have been issued for a specification, the owner is sent an email notification as soon as one of the signature documents has been workflowed to "Not Approved". The workflow owner is sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

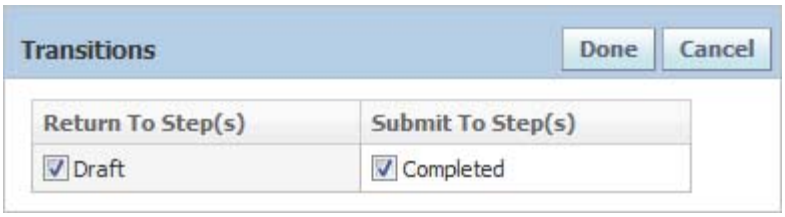
Figure 2–14 Transitions section



To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 2–15. This dialog box lists all steps that exist on the workflow template.

Figure 2–15 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

Conditions There may be times when "Who can do what and go where" conditions should differ, based on either user-specific attributes or specification attributes.

Conditions added to a transition must be met in order for the transition to appear as an option to the user. Depending on the workflow object selected, conditions can be based on the following attributes:

- **Business Unit**—Evaluates the business unit value on the specification.
- **Complies With**—Evaluates the Complies With value on the specification.
- **Country**—Evaluates the country value on the specification.
- **Classification**—Evaluates the classification value on the specification. (This only applies to material specifications)
- **Menu Item Class**—Evaluates the menu item class value on the specification. (This only applies to menu item specifications)
- **Segment**—Evaluates the business segment on the specification.
- **Standard**—Evaluates the standard value on the specification. (This only applies to menu item specifications and product specifications)
- **Category**—Evaluates the specification category on the specification.
- **User Groups**—Evaluates what user groups the user accessing the specification belong to.
- **User Roles**—Evaluates what user roles the user accessing the specification has.

Multiple conditions can be used to model more complex routing requirements. For example, if the user has the [SPEC_ADMIN] role and the specification has the business unit of North America, then the specification can go to the "Approved" status.

To add conditions:

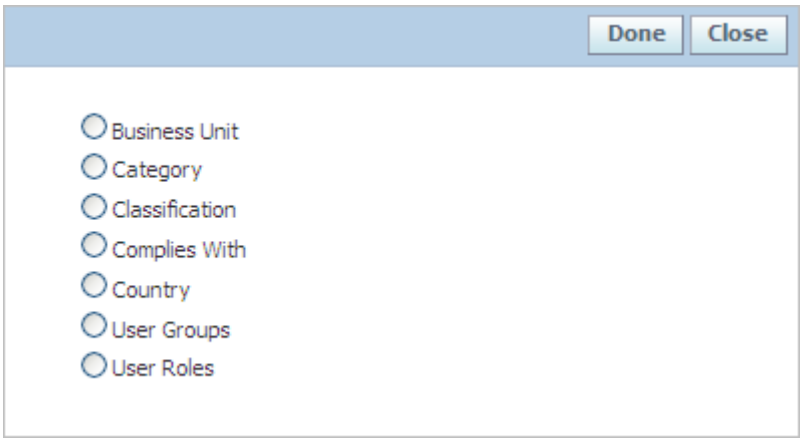
1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 2–16 shows.

Figure 2–16 Conditions dialog box



3. Click **Add New**. A dialog box displays available attributes, as Figure 2–17 shows.

Figure 2–17 Attributes for selected condition



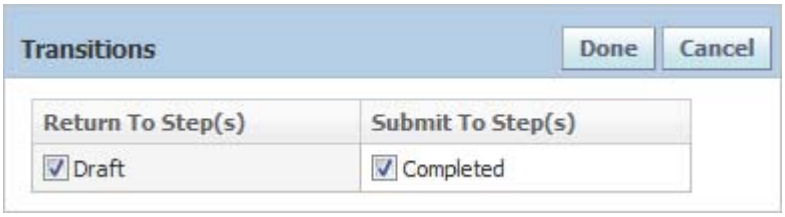
4. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
5. Click the edit icon to place the row in edit mode.
6. Click the add data icon to define the Value column.
7. Select an option from the **Match** drop-down list.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Transitions Transitions answer the question, "Where can I go from here?" Transitions designate which steps are available for transition from the current step.

To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 2–18. This dialog box lists all available active steps that exist on the workflow template for a particular step.

Figure 2–18 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

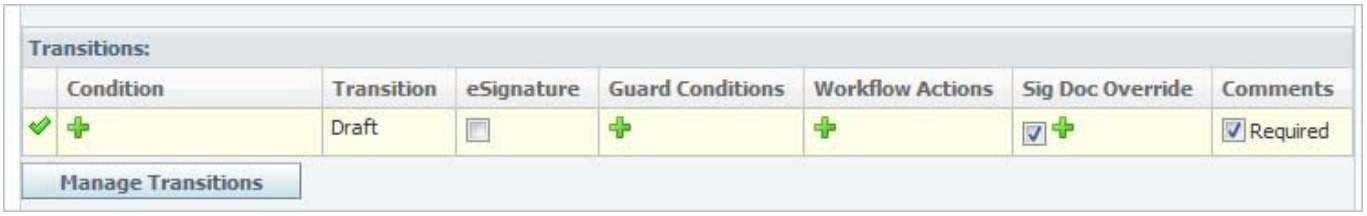
eSignatures eSignatures link transitions to the authentication process. For example, when transitioning a workflow from Review to Approved, you may select this checkbox to indicate re-authentication is required. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Guard Conditions Guard Conditions are an extensibility point that launch classes to determine if a workflow transition can occur. The classes can access the item being workflowed to execute specialized validations programmatically, and either allow the transition to occur, or prevent it and return a list of error messages. These classes are made available for selection in WFA as Guard Conditions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file. Please see the *Agile Product Lifecycle Management for Process Configuration Guide* and the Agile Product Lifecycle Management for Process Extensibility Pack documentation for more details on WFA.

To add guard conditions:

1. Click the edit icon to place the row in edit mode, as Figure 2–19 shows.

Figure 2–19 Transitions row in edit mode



2. If authentication is required on the transition, check the **eSignature** field.
3. To add guard conditions, click the add data icon in the Guard Conditions column. WFA displays a dialog box listing configured guard conditions.
4. Select guard condition(s), and then click **Done**. The selected attribute is added to the Condition column in the Transitions row.

Workflow Actions Workflow actions are an extensibility point that trigger the execution of classes when a workflow transition occurs. The classes can access the item being workflowed to execute specialized actions programmatically. These classes are made available for selection as workflow actions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file.

To add workflow actions:

1. With the row in edit mode, click the add data icon to define the **Workflow Actions** column. The workflow actions dialog box is displayed.

2. Select workflow action(s), and then click **Done**. The selected attribute is added to the Workflow Actions column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Sig Doc Override Check this field to allows users and specifications that meet the override condition to workflow the specification forward without the Signature Request being in an approved state. The Signature Request Override conditions include: Business Unit, Segment, Category, Classification, Complies With, Country, User Group, and User Role.

To notify owners of a signature document override:

1. With the row in edit mode, click the add data icon in the **Sig Doc Override** column. WFA displays a dialog box containing override conditions.
2. Select an override condition, and then click **Done**. The selected condition is added to the Sig Doc Override column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Comments This field indicates whether comments are required to workflow to the next step or back one step. By default it is selected.

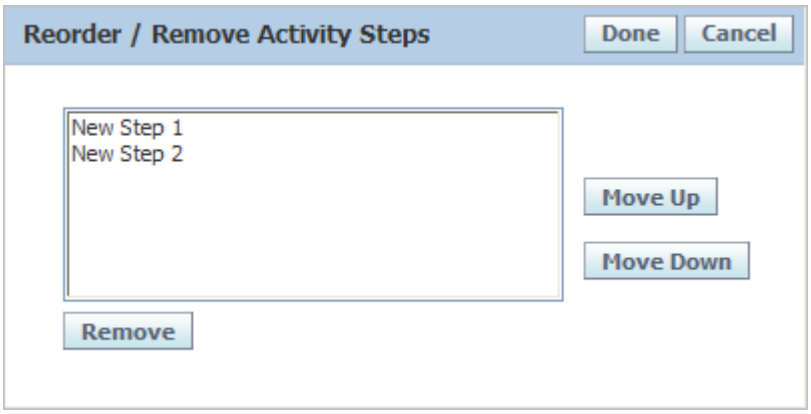
Adding Steps

Click **Add New Step** to add steps to the workflow process template. You can add as many steps as needed.

Reordering and Removing Steps

Click **Reorder / Remove Steps** to reorder or remove workflow steps. Agile PLM for Process displays the Reorder / Remove Activity Steps dialog box, as Figure 2–20 shows.

Figure 2–20 Reorder / Remove Activity Steps dialog box



To reorder a step:

1. Click the step to move.
2. Click **Move Up** or **Move Down** to set the desired order.

3. Repeat steps 1 and 2 for other steps.
4. Click **Done**. The dialog box closes. The steps on the Create Process Template page reflect the order that you set.

To remove a step:

1. Click the step to remove.
2. Click **Remove**. The step is removed from the dialog box.
3. Click **Done**. The dialog box closes. The step that you removed no longer is included on the Create Process Template page.

Steps can only be removed if the template has never been saved. If you want to remove a step after a template has been saved, inactivate the step.

Warning: Reordering and inactivating steps can result in serious consequences and issues for the workflow process template.

Permissions Section

Permissions are used to manage read and write access to the specification. Permissions reside in the Permissions table, shown in Figure 2–21, and govern:

- What actions can be performed (Read or Write)
- When they can be performed (by Status/Step)
- By whom they can be performed (Users or Groups)

Note: The section level editing feature once denoted by the Type column is being deprecated in a future release. This feature is now configurable, and by default is configured off.

Figure 2–21 Permissions table



To add a permission:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon.
3. Define the permission using the **Action**, **Principal**, and **Criteria** fields as described below and ending on page 2-23.

4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Actions From the drop-down list, select what permission you are granting. Choices are "Read" or "Write."

Principals Select the users or groups who will be assigned permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups.

To add users or user groups as members, follow the procedures "To add users as members:" on page 2-8 and "To add user groups as members:" on page 2-9.

Tokens

You can add the token of "Author," "Owner," or "Signature Requestee" as a principal. The following token choices are available:

- **Author**—The originator of the specification
- **Owner**—A workflow participant assigned as an owner
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the specification

To add tokens to the Permissions table:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 2-9.
5. Click **Done**. The token dialog box displays, as Figure 2–22 shows:

Figure 2–22 Tokens dialog box, Permissions



6. Assign a token by clicking the **Author**, **Owner**, or **Signature Requestee** checkbox. You can make multiple selections.
7. Click **Done**. The users and assigned tokens are added to the Principal field, as Figure 2–23 shows.

Figure 2–23 Added tokens



8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria

Designate which step(s) the principal has the selected permission for. For example, the owner only has edit rights to the specification when its in the Review step.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

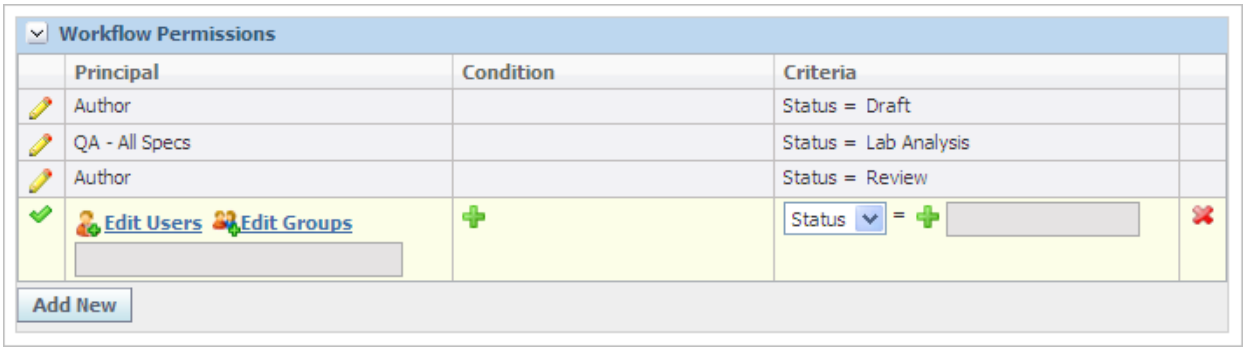
To quickly create permissions click **Generate**. This action will create default permissions. The Generate option overwrites any manual permission entries.

> **Note:** Section level editing can be configured on or off. Refer to the *Agile Product Lifecycle Management for Process Configuration Guide* for more information on this extensibility point.

Workflow Permissions Section

In addition to read and write permissions above, you can also set who has workflow permissions. Workflow permissions are used to manage workflow rights, meaning which users can transition a workflow on a GSM specification.

Figure 2–24 Workflow Permissions table



To add a workflow permission:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.

2. Click the edit icon.
3. Define the permission using the **Principal**, **Condition**, and **Criteria** fields as described below and through page 6-31.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Principal Select the users or groups who will be assigned workflow permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups. The token of "Author" and "Signature Requestee" can also be added as a principal. These tokens represent the specification's author and signature requestee(s).

To add users or user groups as members, follow the procedures "To add users as members:" on page 2-8 and "To add user groups as members:" on page 2-9.

Tokens

The token of "Author" or "Signature Requestee" can also be added as a principal. Users but not user groups can be assigned. The following token choices are available for workflow permissions:

- **Author**—The originator of the specification
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the specification

To add tokens to the Workflow Permissions table:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 6-13.
5. Click **Done**. The token dialog box displays, as Figure 2–25 shows:

Figure 2–25 Token dialog box, Workflow Permissions



6. Assign a token by selecting **Author**, **Signature Requestee**, or both.
7. Click **Done**. The users and assigned tokens are added to the **Principal** field.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

> **Note:** You can also add tokens to existing users.

Conditions There may be times when "Who can workflow and when" conditions should differ, based on either user-specific attributes or specification attributes.

Conditions added to the Workflow Permissions table must be met in order for the Workflow button to appear as an option to the user. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

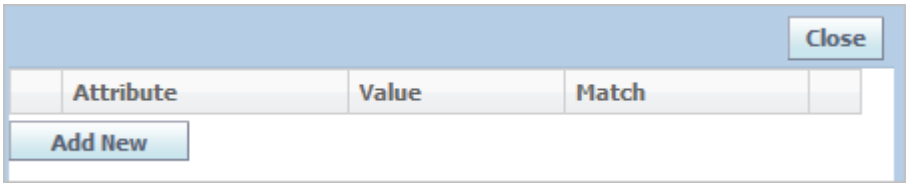
- **Additives**—The additive values on the specification.
- **Allergens**—The allergen values on the specification.
- **Business Unit**—The business unit value on the specification.
- **Catalog**—The specification category on the specification.
- **Classification**—The classification value on the specification. (This only applies to material specification workflow objects)
- **Complies With**—The Complies With value on the specification.
- **Country**—The country value on the specification.
- **Menu Item Class**—The menu item class value on the specification. (This only applies to menu item specifications)
- **Segment**—The business segment on the specification.
- **Standard**—The standard value on the specification. (This only applies to menu item specifications and product specifications)

Multiple conditions can be used to model more complex workflow permission requirements. For example, if the specification is "Organic," then the following users have workflow rights.

To add conditions:

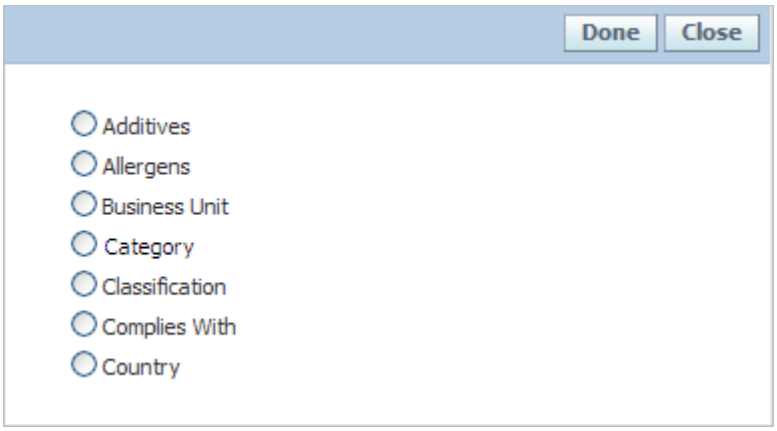
1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 2–26 shows.

Figure 2–26 Conditions dialog box



3. Click **Add New**. A dialog box displays available attributes, shown in Figure 2–27.

Figure 2–27 Attributes for selected condition



4. Select an attribute, and then click **Done**. The selected attribute is appended as a new row in the Conditions dialog box.
5. Click the edit icon to place the row in edit mode.
6. Click the add data icon to define the **Value** column.
7. Select an option from the **Match** drop-down list.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria Designate which step(s) are impacted by the selected permission. For example, the author only has workflow rights to the specification when it is in the "Draft" and "Review" step.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Workflow Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

3

Using WFA to Create SCRM Workflows

This chapter contains instructions for using the Workflow Administration (WFA) application to create workflows in Supply Chain Relationship Management (SCRM). Topics in this chapter include:

- Introducing SCRM Workflow Templates
- Creating SCRM Workflow Templates

Introducing SCRM Workflow Templates

There are two main types of workflow templates for SCRM:

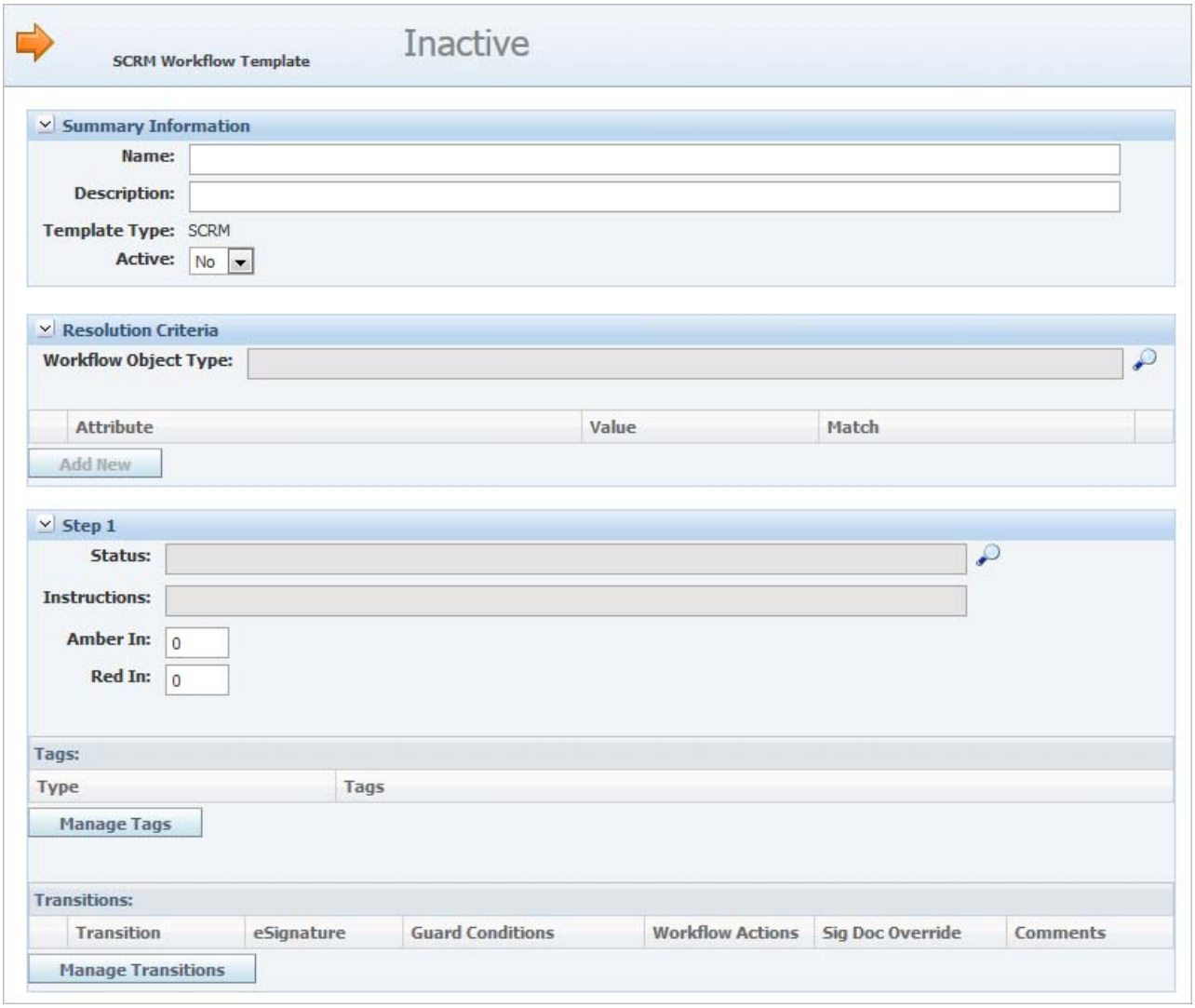
- **Specification-related sourcing approvals**—These can resolve using the receiving facility business unit, source facility business unit, specification type, and category type. Available specification types are:
  - Equipment specifications
  - Material specifications
  - Packaging material specifications
  - Product specifications
  - Trade specifications
- **Non-specification-related sourcing approvals**—These can resolve using the receiving facility business unit and source facility business unit object types.

Creating SCRM Workflow Templates

To create a new SCRM workflow template:

1. Click **WFA** on the left navigation panel.
2. Click **New > SCRM Workflow Template** in the action menu. A new workflow template page is displayed, as shown in Figure 3–1.

Figure 3–1 SCRM Workflow Template page



3. Enter information described in:
   - "Summary Information Section" on page 3-3
   - "Resolution Criteria Section" on page 3-3
   - "Steps Section" on page 3-5
   - "Permissions Section" on page 3-16
   - "Workflow Permissions Section" on page 3-18
4. Click **Save & Close**.

5. Flush the workflow cache group, as described in "Reference Cache" on page 6-1.

> **Note:** For instructions on workflow management in GSM (Global Specification Management), which are slightly different from SCRM instructions, see Chapter 2, "Using WFA to Create GSM Workflows". See Chapter 5, "Using WFA to Manage CSS Workflows" for instructions on CSS workflows.

Summary Information Section

Enter the following workflow information in the Summary Information section:

Name Enter a unique name for the workflow. This name will appear to the SCRM user when resolving a sourcing approval to a workflow. It is also shown on a sourcing approval as the Current Workflow value on the approval/audit trail tab. This is a required field.

Description Enter a description for the workflow. This will appear to the SCRM user when resolving a sourcing approval to a workflow. This is a required field.

Template Type This field represents the type of workflow template. There are four types of workflows: GSM, SCRM, PQM and CSS.

Active Select **Yes** to make the template active when the workflow template is ready to become available for use in Agile PLM for Process. Otherwise, the template will remain inactive and unavailable for general use.

Resolution Criteria Section

Sourcing approval workflows can resolve using segment, receiving facility business unit, sourcing facility business unit, receiving facility segment, sourcing facility segment, specification type, and category.

Figure 3–2 Resolution Criteria Section



> **Note:** Once a sourcing approval has resolved to a workflow, users with the role of [CAN_RERESOLVE_WORKFLOWS_SCRM] can re-resolve the sourcing approval to a different workflow in SCRM.

Enter the following workflow information in the Resolution Criteria section:

Workflow Object Type To assign a **Workflow Object Type**, click the search icon to display a dialog box of workflow object types. There are two main types of workflow templates for SCRM:

- Specification-related sourcing approvals
- Non-specification related sourcing approvals

Select the type of sourcing approval that will consume this workflow process template. There is a one-to-one relationship between the template and object type; only one selection is allowed.

Attributes You can also add resolution criteria attributes, by clicking **Add New** and selecting the attribute from the dialog box. For specification-based sourcing approvals, workflows can resolve using the receiving facility business unit, source facility business unit, receiving facility segment, sourcing facility segment, segment, specification type, template, and category. Note that category is available as a workflow resolution criterion once the user has selected a specification type.

For non-specification sourcing approvals, workflows can resolve using the receiving facility business unit, sourcing facility business unit, receiving facility segment, sourcing facility segment, segment, and template.

Value Click the edit icon to place the row in edit mode. Click the add data icon to display a selection list of the attribute added. Select the value to evaluate, and then click **Done**.

Match Make a selection as follows:

- **Exact Match**—The values must match exactly
- **+ Children**—The values must be related hierarchically (the match moves down the hierarchy only)

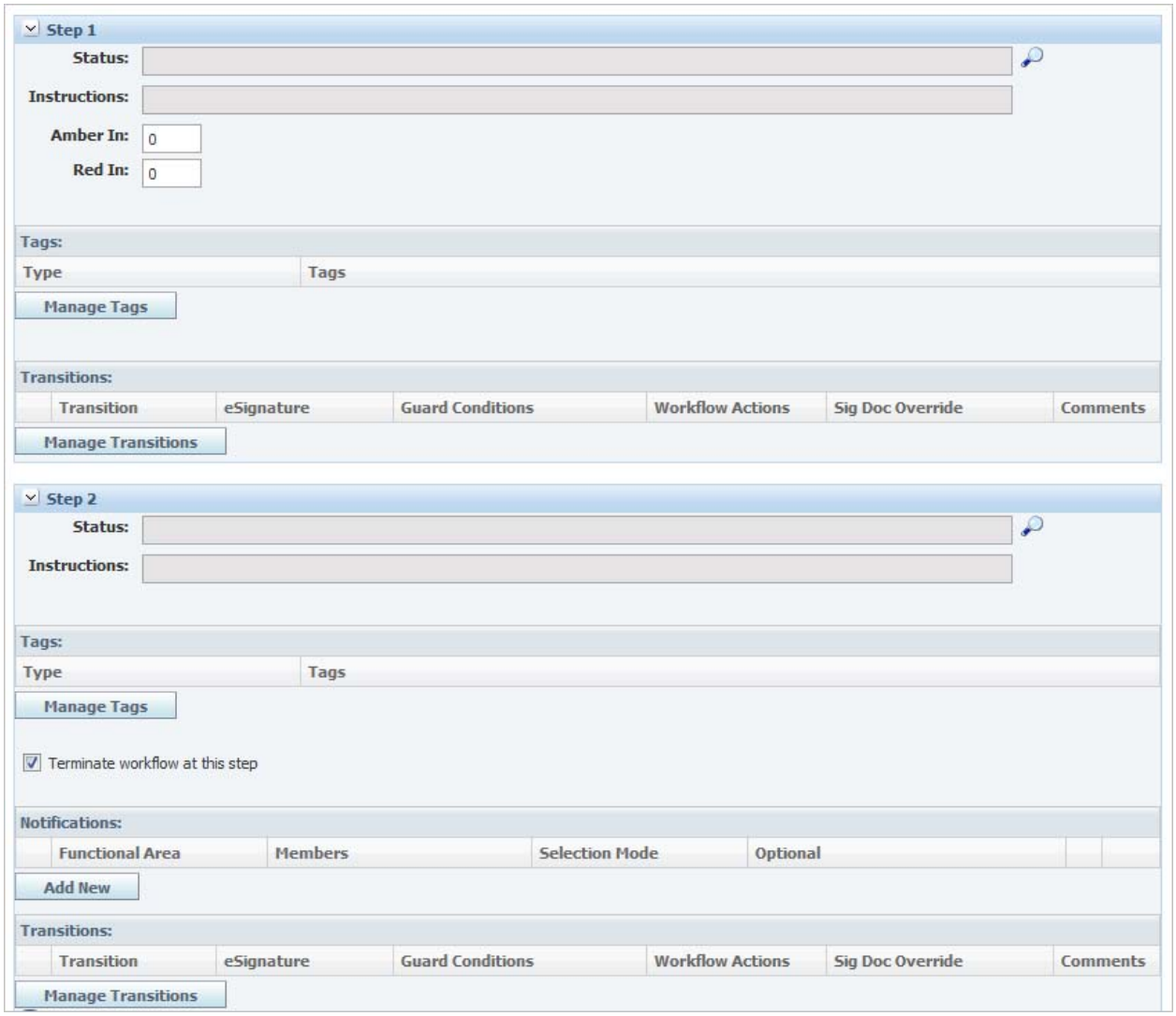
Note: Attribute values in the same row will represent an OR statement. For example, if the specification business unit equals "USA" or "Canada" it will resolve to this template.

Attribute values in different rows represent an AND statement. For example, the specification must have a business unit of "USA" and a specification category value of "Dairy > Milk > Powder."

Steps Section

Each workflow template must have a minimum of two steps, as represented in the Step 1 and Step 2 sections. You can add more step sections by clicking **Add New Step**. By default, Step 2 is set as the last step in the workflow as indicated by the "Terminate workflow at this step" box. Un-check the box as needed.

Figure 3–3 Steps sections



To define steps:

1. Define the **Status** by clicking the search icon. A Select Status dialog box displays. You can choose from a list of existing statuses or click **Add New** to create a new status and name it. Workflow process templates contain only a small number of statuses, since statuses, once created, are permanent. Statuses should also be common and applicable across all workflows.

> **Note:** Give each status a unique status name. Status names cannot be changed once the template is activated.

2. The **Instructions** field is populated with the instructions attached to the chosen status. If you create a new status, enter a new set of instructions for this field.
3. In the **Amber In** field, enter the number of days until this workflow step displays in amber, indicating that the deadline is approaching. This field displays in all steps except the terminal step.
4. In the **Red In** field, enter the number of days until this workflow step displays in red, indicating that the deadline has passed. This field displays in all steps except the terminal step.
5. Click **Manage Tags** to tie workflow actions or visibilities to this step. Tags are a list of specialized functions. This field is available for specification-related sourcing approvals only. Using tags, you can attach predetermined behaviors to workflow steps. Administrators create and manage tags using the ADMN>WFA>Tags option. See the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information. Available choices are:
   - **Initial Load**—This tag will be used to interact with future APIs. This tag currently does not define any system behavior.
   - **Is Approved**—This tag is used to specify that the sourcing approval is in an approved state.
   - **Publish Template**—When a specification or sourcing approval reaches a step with this tag, the user will be able to create an instance from this template.
   - **Publish to Supplier Portal**—This action will publish the sourcing approvals tied to this step to the Supplier Portal. This is a valuable feature for publishing only approved sourcing approvals to your suppliers.
   - **Send Notification to Sourcing Supplier**—This action notifies the sourcing facility when a sourcing approval is published to the Supplier Portal.
   - **Supplier Approved**—This tag is used to specify which status represents supplier approval. All statuses tagged with this will appear in the supplier electronic review transition drop-down. See the *Agile Product Lifecycle Management for Process Supplier Portal User Guide* more information on electronic review of specifications.
   - **Supplier Rejected**—This tag is used to specify which status represents supplier rejection. All statuses tagged with this will appear in the supplier electronic review transition drop-down. See the *Agile Product Lifecycle Management for Process Supplier Portal User Guide* more information on electronic review of specifications.
   - **Supplier Review**—This tag is used to specify when the specification is ready for supplier review. When this tag is included and the specification is published to Supplier Portal, the supplier will be allowed to submit an electronic signature. See the *Agile Product Lifecycle Management for Process Supplier Portal User Guide* more information on electronic review of specifications.

   Visibility tags can also be added here. See "Controlling Visibility Using Tags" on page A-1 for more information.
6. If needed, check the **Terminate workflow at this step** box to end the workflow at this step. This setting indicates that no further steps are required.
7. Click **Save**. If needed, add more steps by clicking **Add New Step** and repeating this procedure.

Owners Table

Use the Owners table to designate the person(s) responsible for managing the sourcing approval, as Figure 3–4 shows. An owner of the workflow:

- Will receive items in their Action Items list
- Can advance the sourcing approval in the workflow process by clicking **Workflow** in the upper right corner of the sourcing approval page.

Figure 3–4 Owners table



Note: You cannot set owners on the first and terminal steps.

To add an owner:

1. Click **Add New** to create a new owner's row.
2. Define the owner by **Functional Area**, **Members**, **Roles**, **Selection Mode**, and **Optional**, as described below and ending on page 3-9.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will be assigned ownership. This value will also be used to organize groups of owners available for a user's selection during the workflow transition. Administrators create and manage functional areas using the Manage >WFA >Functional Area (WFA) option. See the "Functional Area - (WFA")" section of the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information.

Members Select the users or groups who will be assigned ownership. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will be used when assigning ownership.

To add users as members:

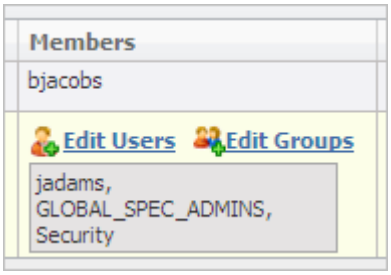
1. With the row in edit mode, click **Edit Users**. The user search page is displayed with "Last Name" and "Starts With" default search criteria.
2. Enter the user's last name in the third search criteria field.
3. Click **Search**. User names matching the information you provided are listed in the Search Results section.
4. Click the user name. It displays in the Selected Items section.
5. Repeat step 2 through step 4 to select other users.

6. Click **Done**. The users are added to the Members column.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

To add user groups as members:

1. With the row in edit mode, click **Edit Groups**. The groups dialog box is displayed.
2. Check the groups to add as members.
3. Click **Done**. The groups are added to the Members column, shown in Figure 3–5.

Figure 3–5 Selected members



4. Click the apply changes icon to apply your changes.
5. Click **Save**.

To delete users:

1. With the row in edit mode, click **Edit Users**. The user search page displays.
2. In the Selected Items section, click the user to delete, then click **Done**. The user that you selected is removed from the Members column.
3. Repeat steps 1 and 2 to delete additional users.
4. Click **Save**.

To delete user groups:

1. With the row in edit mode, click **Edit Groups**. The group dialog box displays.
2. Un-check the groups to delete.
3. Click **Done**. The dialog box closes. The groups that you selected are removed from the Members column.
4. Click **Save**.

Roles You can designate the author of the sourcing approval as the owner by selecting the value of "Author."

Selection Modes A user moving a sourcing approval to the next workflow step could have the opportunity to select an owner. Selections will be organized for the user by functional area. Selection Mode allows you to control this process.

Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.

- **One Member**—Choose this mode to allow the workflower to select only one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Optional Select this checkbox to make the workflower's selection optional.

Signature Requests Table

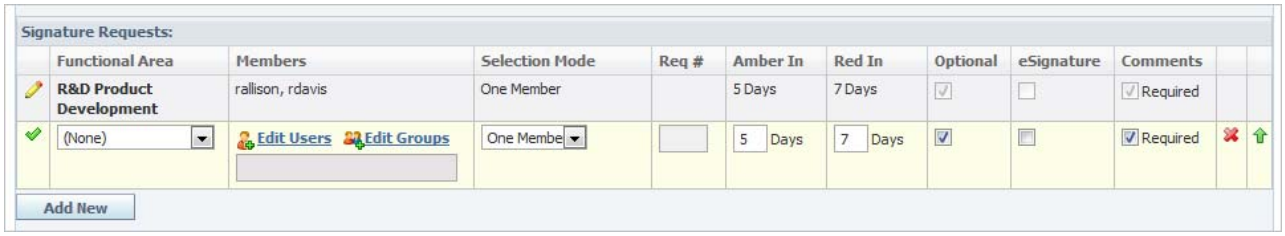
Use the Signature Requests table to assign signature reviewers. Signature requestees represent a functional area, group, or individual who is responsible for reviewing information contained within a sourcing approval. The signature requestee approves or disapproves the sourcing approval through the use of signature documents. This review enables the sourcing approval to move forward in the workflow process.

You can designate a minimum number of "Approved" signature documents required in order to workflow SCRM objects forward in the workflow process. For example, you can now configure WFA to send a single signature request to multiple users within a group, and once a single user "Approves" a signature request and no user "Not Approves" a signature request, the workflow may proceed without "Approval" of the remaining signature requests.

If multiple signature documents have been issued for a sourcing approval, the owner is sent an email notification as soon as one of the signature documents have been workflowed to "Not Approved". The workflow owner should be sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

The owner of a signature request can now workflow the sourcing approval to a prior step regardless of whether all signature request have been approved or disapproved by requestees. You can also set whether authentication is required using the eSignature checkbox. Figure 3–6 shows the Signature Requests table.

Figure 3–6 Signature Requests table



Note: You cannot assign signature requestees on the first and terminal steps.

To add signature requestees:

1. With the page in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the **Functional Area**, **Conditions**, **Members**, **Selection Mode**, **Req #**, **Amber In**, **Red In**, **Optional**, **eSignature**, and **Comments** fields as described below and ending on page 3-12.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Use this field to select the functional area for users or groups who will receive signature requests. This value will be used to organize the SCRM user's workflow selections.

Members Use this field to select the users or groups who will be assigned as signature requestees. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will receive signature requests.

To add users as members, refer to the procedure "To add users as members:" on page 3-7. To add user groups as members, refer to the procedure "To add user groups as members:" on page 3-8.

Selection Modes A user who is moving a sourcing approval to the next workflow step could have the opportunity to select an owner. Selection Mode allows you to control this process. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Req # Use this field to designate a a number of approved signature documents required in order to workflow SCRM objects forward in the workflow process. For example, if you want three people from the group "Nutrition" to provide an approved signature and it doesn't matter which three people from the Nutrition group provide the approvals, you would add the "Nutrition" group to the Members column, select **All Members** in the Selection Mode column, then enter **3** in the "Req #" field.

You can also select **Multiple Members** in the Selection Mode column. This selection will allow the user who is workflowing the sourcing approval to select a sub set of users who could possibly approve the sourcing approval. For example, assume you have 20 users in the Nutrition group and you only need 3 of them to sign off. You may not want all members of the nutrition group to be solicited. So when the user is workflowing the sourcing approval they can select 10 specific users out of the group, however only 3 will be required to sign off.

Select Blank or any integer for 1 to 99. The default value is Blank. If you select blank, it works same as previous, which means all selected signature requestee need to approve the request before the user can workflow forward. This field is activated when you have selected “All Members” and "Multiple Members" for the Selection Mode.

Amber In and Red In Options

- **Amber In**—Enter the number of days until the signature request displays in amber, indicating that the deadline is approaching.

- **Red In**—Enter the number of days until the signature request displays in red, indicating that the deadline has passed.

Optional Select this checkbox to make the workflower's selection optional.

eSignature Select this check box to indicate eSignature re-authentication is required. When this is selected users will be required to re-authenticate before being allowed to workflow signature requests to approved. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Comments This field indicates whether comments are required to workflow to the next step or back one step. By default it is selected.

Notifications Table

Use the Notifications table to designate who should be notified during this step. Users or groups designated will receive an email notification that the sourcing approval has been moved in the workflow process to a particular step. This role is considered informational only, and additional notification recipients are not responsible for providing any formal response or input into the sourcing approval. Figure 3–7 shows the Notifications table.

Figure 3–7 Notifications table



Note: You cannot designate notifications on the first step.

To add notifications:

1. With the row in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the **Functional Area**, **Members**, **Selection Mode**, and **Selection Optional** fields as described below.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will receive notifications. This value will be used to organize the SCRM user's workflow selections.

Members Select the users or groups who will be sent notifications. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will receive notifications.

To add users as members, refer to the procedure "To add users as members:" on page 3-7. To add user groups as members, refer to the procedure "To add user groups as members:" on page 3-8.

Selection Modes When a user is workflowing a sourcing approval they could have the opportunity to select who receives notifications. Selection Mode allows you to control this process. Members displayed for selection will be organized by functional area. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Optional Select this checkbox to make the workflower's selection optional.

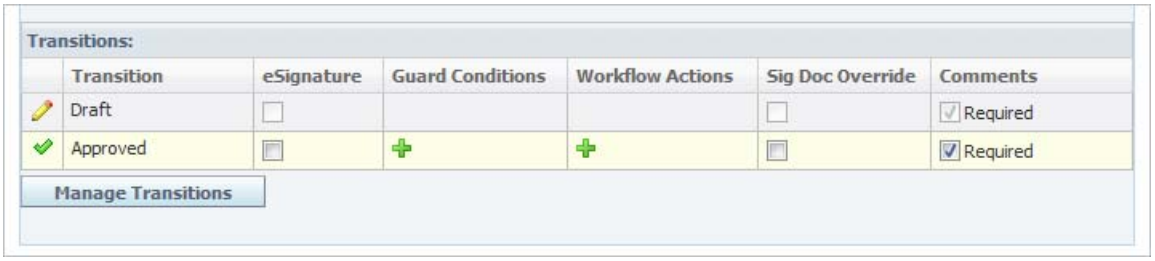
Transitions Table

Transitions answer the question, "Where can I go from here?" This section is used to set up which steps may be available for transition from the current step.

Transitions can be configured with a guard condition extensibility point that can programmatically determine if a workflow transition can occur, as described in "Guard Conditions" on page 3-13. Once the workflow transition does occur, workflow actions can be triggered to execute some process, as described in "Workflow Actions" on page 3-13.

A signature document workflow override is available. Sourcing approval owners are now sent an email notification as soon as one signature document has been workflowed to "Not Approved" instead of waiting for all signature documents to be completed. If multiple signature documents have been issued for a sourcing approval, the owner is sent an email notification as soon as one of the signature documents has been workflowed to "Not Approved". The workflow owner is sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

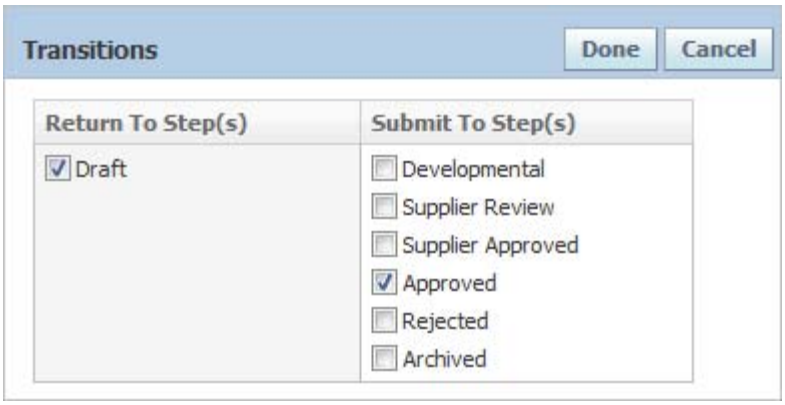
Figure 3–8 Transitions section



To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 3–9. This dialog box lists all steps that exist on the workflow template.

Figure 3–9 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

eSignatures eSignatures link transitions to the authentication process. For example, when transitioning a workflow from Review to Approved, you may select this checkbox to indicate authentication is required. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Guard Conditions Guard Conditions are an extensibility point that launch classes to determine if a workflow transition can occur. The classes can access the item being workflowed to execute specialized validations programmatically, and either allow the transition to occur, or prevent it and return a list of error messages. These classes are made available for selection in WFA as Guard Conditions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file. Please see the *Agile Product Lifecycle Management for Process Configuration Guide* and the Agile Product Lifecycle Management for Process Extensibility Pack documentation for more details on WFA.

To add guard conditions:

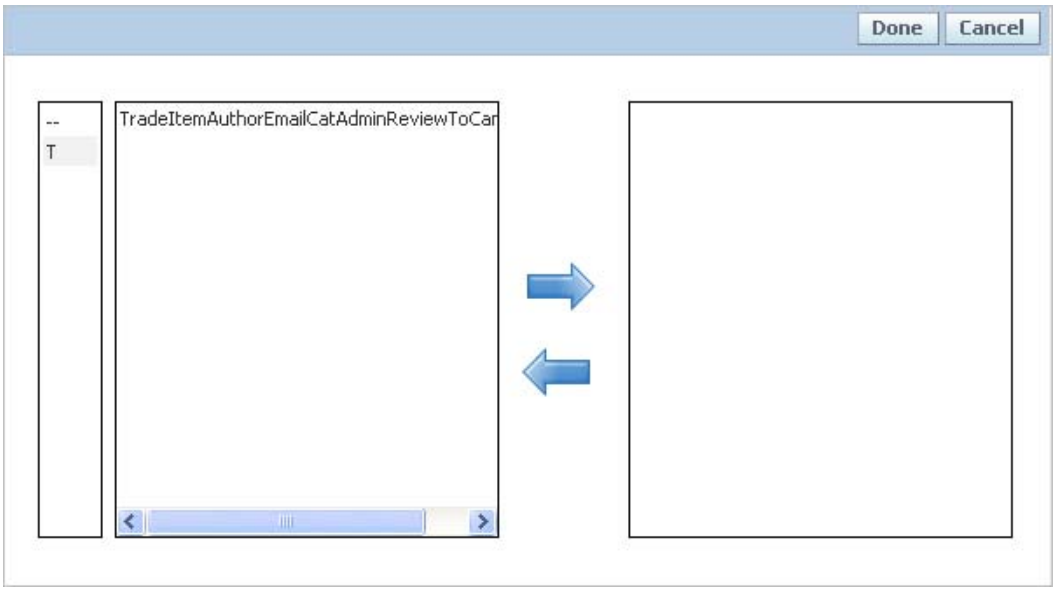
1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Guard Conditions column. WFA displays a dialog box listing configured guard conditions.
3. Select guard condition(s), and then click **Done**. The selected attribute is added to the Guard Conditions column in the Transitions row.

Workflow Actions Workflow actions are an extensibility point that trigger the execution of classes when a workflow transition occurs. The classes can access the item being workflowed to execute specialized actions programmatically. These classes are made available for selection as workflow actions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file.

To add workflow actions:

1. With the row in edit mode, click the add data icon to define the Workflow Actions column. The workflow actions dialog box is displayed, as Figure 3–10 shows.

Figure 3–10 Workflow Actions dialog box



2. Select workflow action(s), and then click **Done**. The selected attribute is added to the Workflow Actions column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Sig Doc Override Check this field to allows users that meet the override condition to workflow the sourcing approval forward without the Signature Request being in an approved state. The Signature Request Override conditions include: Receiving Facility BU, Receiving Facility Segment, Segment, Sourcing Facility Segment, Specification Type, Category, User Group, User Role, and Sourcing Facility BU.

> **Note:** Category is available as a Sig Doc Override condition once the user has selected a specification type.

To notify owners of a signature document override:

1. With the row in edit mode, click the add data icon in the **Sig Doc Override** column. WFA displays a dialog box containing owners.
2. Select owners, and then click **Done**. The selected owners are added to the Sig Doc Override column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Comments This field indicates whether comments are required to workflow to the next step or back one step. By default it is selected.

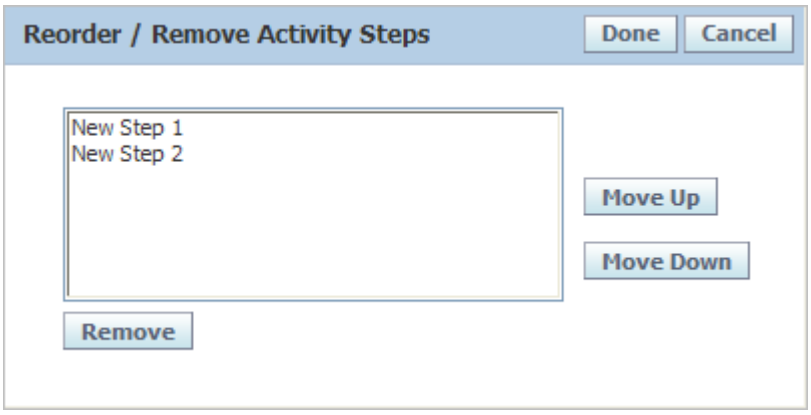
Adding Steps

Click **Add New Step** to add steps to the workflow process template. You can add as many steps as needed.

Reordering and Removing Steps

Click **Reorder / Remove Steps** to reorder or remove workflow steps. Agile PLM for Process displays the Reorder / Remove Activity Steps dialog box, as Figure 3–11 shows.

Figure 3–11 Reorder / Remove Activity Steps dialog box



To reorder a step:

1. Click the step to move.
2. Click **Move Up** or **Move Down** to set the desired order.
3. Repeat steps 1 and 2 for other steps.
4. Click **Done**. The dialog box closes. The steps on the Workflow Template page reflect the order that you set.

To remove a step:

1. Click the step to remove.
2. Click **Remove**. The step is removed from the dialog box.
3. Click **Done**. The dialog box closes. The step that you removed no longer is included on the Workflow Template page.

Steps can only be removed if the template has never been saved. If you want to remove a step after a template has been saved, inactivate the step.

Warning: Reordering and inactivating steps can result in serious consequences and issues for the workflow process template.

Permissions Section

Permissions are used to manage read and write access to the sourcing approval. Permissions, shown in Figure 3–12, govern:

- What actions can be performed (Read/Write)
- When they can be performed (by Status/Step)
- By whom they can be performed (Users or Groups)

Figure 3–12 Permissions table



To add a permission:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon.
3. Define the permission using the **Action**, **Principal**, and **Criteria** fields as described below and ending on page 3-17.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Actions From the drop-down list, select what permission you are granting. Choices are Read or Write.

Principals Select the users or groups who will be assigned permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups.

To add users or user groups as members, follow the procedures on page 3-7 and on page 3-8.

Tokens The token of "Author," "Owner," or "Signature Requestee" can also be added as a principal. The following token choices are available:

- **Author**—The originator of the sourcing approval
- **Owner**—A workflow participant assigned as an owner
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the sourcing approval

To add tokens to the Permissions table:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 3-7.

5. Click **Done**. The token dialog box displays, as Figure 3–13 shows:

Figure 3–13 Tokens dialog box, Permissions



6. Assign a token by checking the **Author**, **Owner**, or **Signature Requestee** box. You can make multiple selections.
7. Click **Done**. The users and assigned tokens are added to the Principal field, as Figure 3–14 shows.

Figure 3–14 Added tokens



8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria

Designate which steps are impacted by the selected permission. For example, the owner only has edit rights to the sourcing approval when its in the Review step.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

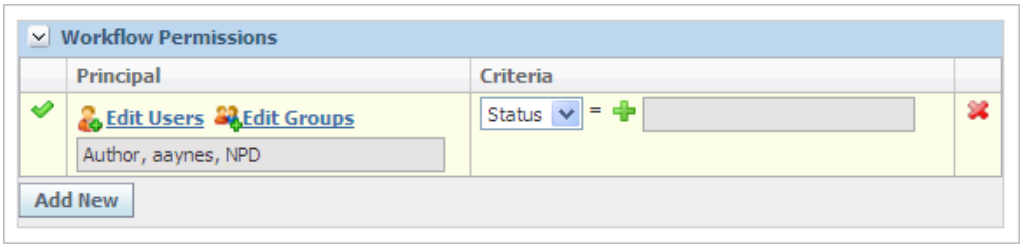
To quickly create permissions click **Generate**. This action will create default permissions. The Generate option overwrites any manual permission entries.

Note: Section level editing can be configured on or off. Refer to the *Agile Product Lifecycle Management for Process Configuration Guide* for more information on this extensibility point.

Workflow Permissions Section

In addition to read and write permissions above, you can also set who has workflow permissions, as Figure 3–15 shows. Workflow permissions are used to manage workflow rights, meaning which users can transition a workflow on an SCRM sourcing approval.

Figure 3–15 Workflow Permissions table



To add a workflow permission:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.
2. Click the edit icon.
3. Define the permission using the **Principal** and **Criteria** fields, as described below and ending on page 3-19.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Principals Select the users or groups who will be assigned workflow permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups. The token of "Author" and "Signature Requestee" can also be added as a principal. These tokens represent the sourcing approval's author and signature requestee(s).

To add users or user groups as members, follow the procedures found on page 3-7.

Tokens

You can add the token of "Author" or "Signature Requestee" as a principal. You can assign users but not user groups. The following token choices are available for workflow permissions:

- **Author**—The originator of the sourcing approval
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the sourcing approval

To add tokens to the Workflow Permissions table:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 3-7.
5. Click **Done**. The token dialog box displays, as Figure 3–16 shows:

Figure 3–16 Token dialog box, Workflow Permissions



6. Assign a token to the user(s) by selecting **Author**, **Signature Requestee**, or both.
7. Click **Done**. The users and assigned tokens are added to the **Principal** field.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

> **Note:** You can also add tokens to existing users.

Criteria Designate which step(s) are impacted by the selected permission. For example, the author only has workflow rights to the sourcing approval when its in the "Draft" and "Review" steps.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Workflow Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

4

Using WFA to Create PQM Workflows

This chapter contains instructions for using the Workflow Administration (WFA) application to create workflows in Product Quality Management (PQM). Topics in this chapter include:

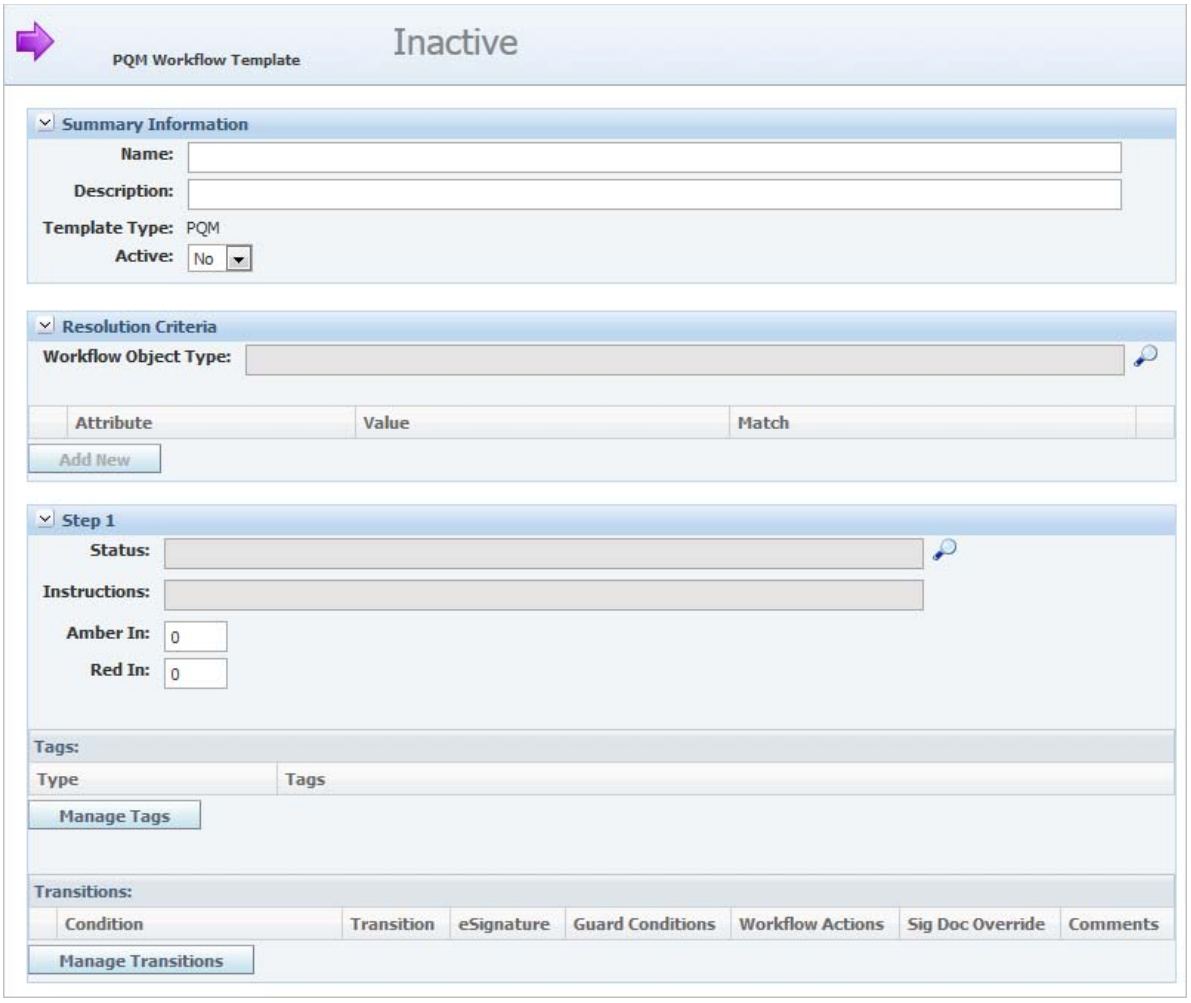
- Creating New PQM Workflow Templates

Creating New PQM Workflow Templates

To create a new PQM workflow template:

1. Click **WFA** on the left navigation panel.
2. Click **New > PQM Workflow Template** in the action menu. Agile PLM for Process displays a new workflow template page, as shown in Figure 4–1.

Figure 4–1 PQM Workflow Template page



3. Enter information described in:
   - "Summary Information Section" on page 4-2
   - "Resolution Criteria Section" on page 4-3
   - "Step Sections" on page 4-4
   - "Permissions Section" on page 4-21
   - "Workflow Permissions Section" on page 4-23
4. Click **Save & Close**.
5. Flush the Workflow Cache Group, as described in Chapter 6, "Reference Cache".

Summary Information Section

Enter the following workflow information in the Summary Information section:

Name Enter a unique name for the workflow. This name will appear to the PQM user when resolving an issue, action, or audit to a workflow. It is also shown on a issue, action, or audit as the Current Workflow value on the Approval/Audit Trail tab. This is a required field.

Description Enter a description for the workflow. This description will appear to the PQM user when resolving an issue, action, or audit to a workflow. This is a required field.

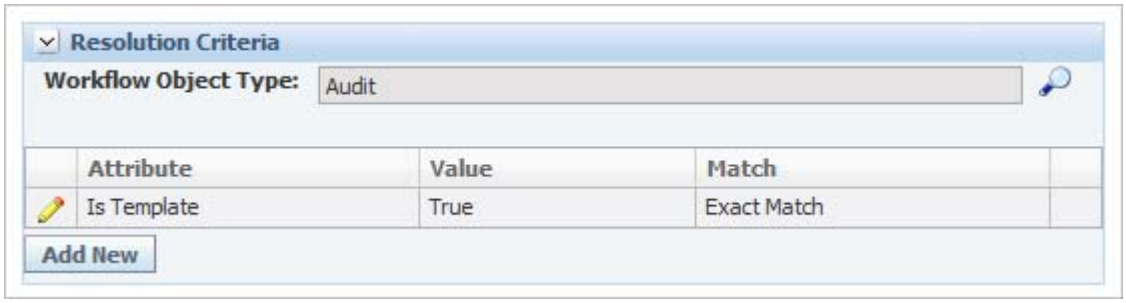
Template Type This field cannot be edited. This field represents the type of workflow template. There are four types of workflows: GSM, SCRM, PQM and CSS.

Active Select **Yes** to make the template active when the workflow template is ready to become available for use in Agile PLM for Process. Otherwise, the template will remain inactive and not available for general use.

Resolution Criteria Section

PQM objects do not auto resolve; the workflow is selected on the PQM template or by the user at the time of creation. Resolution Criteria is only used to filter workflow field selection options. For example, when creating a PQM audit template only WFA templates with the resolution criteria of Audit > Is Template will be shown to the user when selecting a workflow. When creating a PQM action, only WFA templates with the workflow object type of Action will appear for selection.

Figure 4–2 Resolution Criteria section



Enter the following workflow information in the Resolution Criteria section:

Workflow Object Type To assign a **Workflow Object Type**, click the search icon to display a dialog box of workflow object types. Select the workflow object type (Issue, Action, and Audit) that will consume this workflow process template. This is a one-to-one relationship between the template and object type; only one selection is allowed. This is a required field.

Attribute You can also add resolution criteria attributes, by clicking **Add New** and selecting the attribute from the dialog box. Resolution criteria attributes available will depend on the workflow object selected.

The following attributes are available:

- **Is Template**—Select this attribute to evaluate whether the issue, action, or audit is a template during selection.

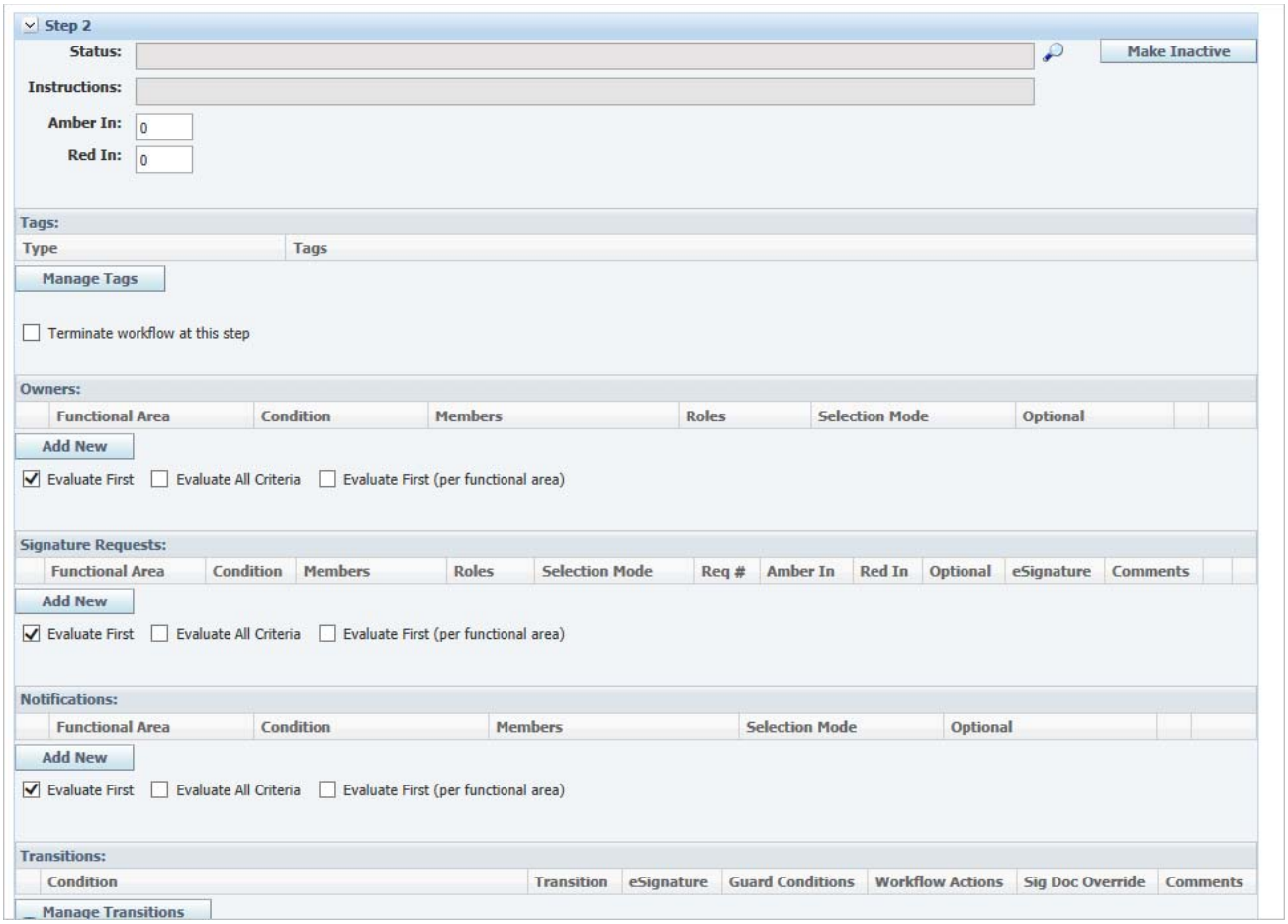
Value Value will be automatically selected when Is Template is selected. No further action is required.

Match Match will be automatically selected when Is Template is selected. No further action is required.

Step Sections

Each workflow template must have a minimum of two steps, as represented in the Step 1 and Step 2 sections. You can add more step sections by clicking **Add New Step**. By default, Step 2 is set as the last step in the workflow as indicated by the "Terminate workflow at this step" box. Un-check this box as needed.

Figure 4–3 Steps sections



To define steps:

1. Define the **Status** by click the search icon. A Select Status dialog box displays. You can choose from a list of existing statuses or click **Add New** to create a new status and name it. Workflow process templates contain only a small number of statuses, since statuses, once created, are permanent.

   Note: Give each status a unique status name. Status names should also be common and applicable across all workflows. Status names cannot be changed once the template is activated.

2. The **Instructions** field is populated with the instructions attached to the chosen status. If you create a new status, enter a new set of instructions for this field.
3. In the **Amber In** field, enter the number of days until this workflow step displays in amber, indicating that the deadline is approaching. This field displays in all steps except the terminal step.
4. In the **Red In** field, enter the number of days until this workflow step displays in red, indicating that the deadline has passed. This field displays in all steps except the terminal step.
5. Click **Manage Tags** to tie tags to this step using the tags dialog box. Tags are a list of specialized functions. Using tags, you can attach predetermined behaviors to workflow steps. Administrators create and manage system actions using the ADMN>WFA>Tags option. See the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information. Available choices are:
   - **Cancelled**—The issue, action or audit has been deemed invalid and is cancelled.
   - **Complete**—The issue, action or audit has been completed/corrected.
   - I**nitial Load**—This tag will be used to interact with future APIs. This tag currently does not define any system behavior.
   - **Is Approved**—When a specification or template reaches a step with this tag, Get Latest Revision capability in GSM will work.
   - **Pending**— The PQM issue, action or audit is pending. For example, the PQM Issue is not a valid problem yet, it was just identified. For example, this could have originated from an automated system.
   - **Publish Template**—When a specification or object template reaches a step with this tag, the user will be able to create an instance from this template.
   - **Publish to Supplier Portal**—This action will publish the PQM object tied to this step to Supplier PQM. This is a valuable feature for publishing only PQM objects that are ready for supplier review.
   - **Released**—The issue, action or audit has been released and is being acted against. For example, the PQM issue has been associated to a corrective action and is being addressed.
   - **Review**—The issue, action or audit is being reviewed.
   - **Submitted**—The issue, action or audit has been acknowledged and deemed valid.

Visibility tags can also be added here. See "Controlling Visibility Using Tags" on page A-1 for more information.

6. If needed, check **Terminate workflow at this step** box to end the workflow at this step. This setting indicates that no further steps are required.
7. Click **Save**. If needed, add more steps by clicking **Add New Step** and repeating this procedure.

Owners Table

Use the Owners table to designate the person(s) responsible for managing the issue, action, or audit. An owner of the workflow:

- Will receive items in their Action Items list
- Can advance the object in the workflow process by clicking **Workflow** in the upper right corner of the object page

Figure 4–4 shows the Owners table.

Figure 4–4 Owners table



Note: You cannot set owners on the first and terminal steps.

To add an owner:

1. Click **Add New** to create a new owner's row.
2. Define the owner by Functional Area, Condition, Members, Roles, Selection Mode, Optional, and Evaluation Method as described below and ending on page 4-14.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will be assigned ownership. This value could be used for evaluation order, as described in "Evaluation Methods" on page 8-13. This value will also be used to organize groups of owners available for a user's selection during the workflow transition. Administrators create and manage functional areas using the ADMN>WFA>Functional Area (WFA) option. See "Functional Area - (WFA) in the See the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information. There may be times when "who owns what" will differ based on specific specification attributes.

Conditions added to an owner row must be met in order for that group or individual to be the owner or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

- **Action Type**—The type of action.
- **Audit Result**—The result of the audit.
- **Audit Type**—The type of audit.
- **Issue Type**—The type of issue.

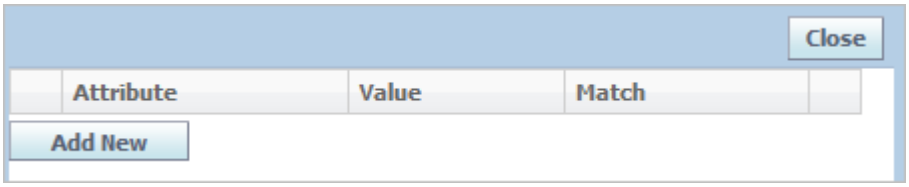
- **Product Lines**—The product line affected by the action, audit, or issue.
- **Resolution**—The resolution of the issue.
- **Severity**—The severity of the issue.
- **User Groups**—The user group associated with the action, audit, or issue.
- **User Roles**—The user roles assigned to a user who will be notified of the action, audit, or issue.

Multiple conditions can be used to model more complex owner assignments. For example, if the PQM issue product line is "snacks and crackers" and the issue has a severity of S1, then Quality Manager A is the owner.

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 4–12 shows.

Figure 4–5 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the Value column.
6. Select an option from the **Match** drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Select the users or groups who will be assigned ownership. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will be used when assigning ownership.

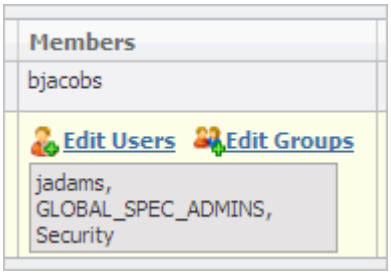
To add users as members:

1. With the row in edit mode, click Edit Users. The user search page is displayed with "Last Name" and "Starts With" default search criteria.
2. Enter the user's last name in the third search criteria field.
3. Click **Search**. User names matching the information you provided are listed in the Search Results section.
4. Click the user name. It displays in the Selected Items section.
5. Repeat step 2 through step 4 to select other users.
6. Click **Done**. The users are added to the Members column.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

To add user groups as members:

1. With the row in edit mode, click **Edit Groups**. The groups dialog box is displayed.
2. Check the groups to add as members.
3. Click **Done**. The groups are added to the Members column, as Figure 8–7 shows.

Figure 4–6 Selected members



4. Click the apply changes icon to apply your changes.
5. Click **Save**.

To delete users:

1. With the row in edit mode, click **Edit Users**. The user search page displays.
2. In the Selected Items section, click the user to delete, then click **Done**. The user that you selected is removed from the Members column.
3. Repeat steps 1 and 2 to delete additional users.
4. Click **Save**.

To delete user groups:

1. With the row in edit mode, click **Edit Groups**. The group dialog box displays.
2. Un-check the groups to delete.
3. Click **Done**. The dialog box closes. The groups that you selected are removed from the Members column.
4. Click **Save**.

Roles Roles represent a specific user that is designated by the instance data on the PQM object. There are two roles available:

- **Author**—The originator of the issue, action or audit will be designated as the owner.
- **Supplier**—The supplier users associated to the companies and/or facilities associated to the issue, action or audit will be designated as the owner.

Selection Modes A user moving an issue, action, or audit to the next workflow step could have the opportunity to select an owner. Selections will be organized for the user by functional area. Selection Mode allows you to control this process. Choose a selection mode as follows:

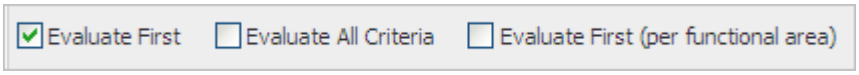
- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to select only one member.

- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Optional Select this checkbox to make the workflower's selection optional.

Evaluation Methods

Figure 4–7 Evaluation method options



Below the table are evaluation method options. These selections will tell WFA how to evaluate the owners table.

- **Evaluate First—**Evaluates each row in order and uses the first row where the conditions are met, ignoring all other rows
- **Evaluate All Criteria—**Evaluates all rows and executes all that apply (provide a union set)
- **Evaluate First** (per functional area)**—**Groups rows by functional area, evaluates rows in order, executes the first one that applies, then skips to the next functional area (ignoring any remaining rows from the original functional area)

Signature Requests Table

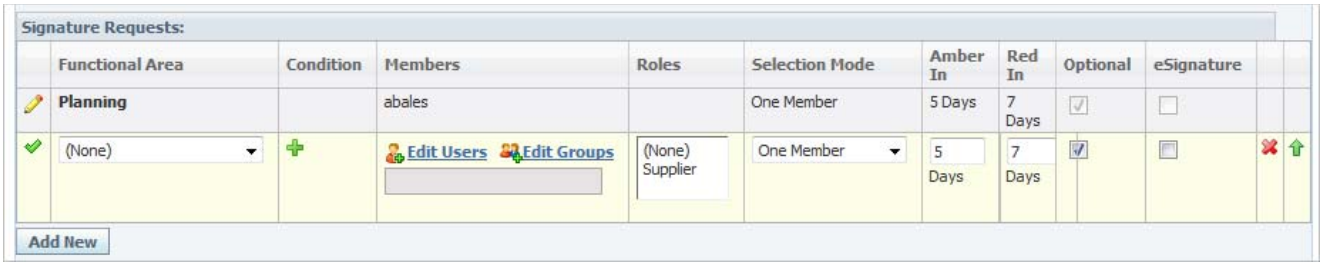
Use the Signature Requests table to assign signature reviewers. Signature requestees represent a functional area, group, or individual who is responsible for reviewing information contained within an issue, action, or audit. The signature requestee approves or disapproves the issue, action, or audit through the use of signature documents. This review enables the object to move forward in the workflow process. You can also set whether authentication is required using the eSignature checkbox.

You can designate a minimum number of "Approved" signature documents required in order to workflow PQM objects forward in the workflow process. For example, you can now configure WFA to send a single signature request to multiple users within a group, and once a single user "Approves" a signature request and no users "Not Approves" a signature request, the workflow may proceed without "Approval" of the remaining signature requests.

If multiple signature documents have been issued for a specifications, the owner is sent an email notification as soon as one of the signature documents have been workflowed to "Not Approved". The workflow owner should be sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

The owner of a signature request can workflow the issue, action, or audit to a prior step regardless of whether all signature request have been approved or disapproved by requestees. Figure 4–8 shows the Signature Requests table.

Figure 4–8 Signature Requests table



Note: You cannot set owners on the first and terminal steps.

To add signature requestees:

1. With the page in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the Functional Area, Condition, Members, Selection Mode, Amber In, Red In, Optional, and eSignature fields as described below and ending on page 8-13.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Use this field to select the functional area for users or groups who will receive signature requests. This value could be used for evaluation order. This value will also be used to organize the PQM user's workflow selections. See "Evaluation Methods" on page 4-9 for more information.

Conditions There may be times when who you require a signature document from will differ based on specific issue, action, or audit attributes.

Conditions added to a row must be met in order for that group or individual to be a signature requestee and/or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

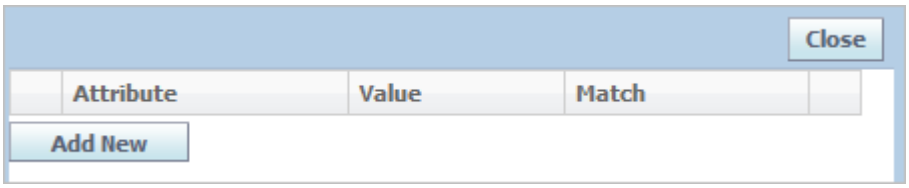
- **Action Type**—The type of action.
- **Audit Result**—The result of the audit.
- **Audit Type**—The type of audit.
- **Issue Type**—The type of issue.
- **Product Lines**—The product line affected by the action, audit, or issue.
- **Resolution**—The resolution of the issue.
- **Severity**—The severity of the issue.
- **User Groups**—The user group associated with the action, audit, or issue.
- **User Roles**—The user roles assigned to a user who will be notified of the action, audit, or issue.

Multiple conditions can be used to model more complex Signature Request assignments. For example, if the PQM Issue Type is of "Customer Injury" and the severity is S1, then the issue must be signed off on by users in the group "Legal".

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 4–9 shows.

Figure 4–9 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the Conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the Value column.
6. Select an option from the Match drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Use this field to select the users or groups who will be assigned as signature requestees. Click **Edit Users** to locate individual users and click Edit Groups to locate groups that will receive signature requests.

To add users and user groups as members, refer to the procedures on "To add users as members:" on page 4-7 and "To add user groups as members:" on page 4-8.

Selection Modes A user who is moving an issue, action, or audit to the next workflow step could have the opportunity to select an owner. The Selection Mode field allows you to control this process. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Req # Use this field to designate a a number of approved signature documents required in order to workflow PQM objects forward in the workflow process. For example, if you want three people from the group "Nutrition" to provide an approved signature and it doesn't matter which three people from the Nutrition group provide the approvals, you would add the "Nutrition" group to the Members column, select **All Members** in the Selection Mode column, then enter **3** in the "Req #" field.

You can also select **Multiple Members** in the Selection Mode column. This selection will allow the user who is workflowing the issue, action, or audit to select a sub set of users who could possibly approve the issue, action, or audit. For example, assume you have 20 users in the Nutrition group and you only need 3 of them to sign off. You may not want all members of the nutrition group to be solicited. So when the user is

workflowing the issue, action, or audit they can select 10 specific users out of the group, however only 3 will be required to sign off.

Select Blank or any integer for 1 to 99. The default value is Blank. If you select blank, it works same as previous, which means all selected signature requestee need to approve the request before the user can workflow forward. This field is activated when you have selected “All Members” and "Multiple Members" for the Selection Mode.

Amber In and Red In Options

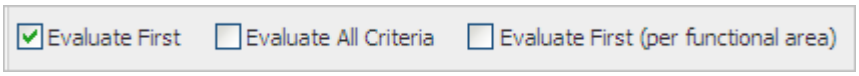
- **Amber In**—Enter the number of days until the signature request displays in amber, indicating that the deadline is approaching.
- **Red In**—Enter the number of days until the signature request displays in red, indicating that the deadline has passed.

Optional Select this check box to make the workflower’s selection optional.

eSignature Select this check box to indicate eSignature authentication is required. When this is selected, users are required to re-authenticate before being allowed to workflow signature requests to approved. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Evaluation Methods

Figure 4–10 Evaluation method options



Below the table are evaluation method options. These selections will tell WFA how to evaluate the owners table.

- **Evaluate First—**Evaluates each row in order and uses the first row where the conditions are met, ignoring all other rows
- **Evaluate All Criteria—**Evaluates all rows and executes all that apply (provide a union set)
- **Evaluate First** (per functional area)—Groups rows by functional area, evaluates rows in order, executes the first one that applies, then skips to the next functional area (ignoring any remaining rows from the original functional area)

Notifications Table

Use the Notifications table to designate who should be notified during this step. Users or groups designated will receive an email notification that the issue, action, or audit has been moved in the workflow process to a particular step. This role is considered informational only, and additional notification recipients are not responsible for providing any formal response or input into the specification. Figure 4–11 shows the Notifications table.

Figure 4–11 Notifications table



Note: You cannot designate notifications on the first step.

To add notifications:

1. With the row in edit mode, click **Add New** to create a new row.
2. Define the signature requestee using the **Functional Area**, **Condition**, **Members**, **Selection Mode**, and **Optional** fields as described below and through on page 4-14.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

Functional Areas Select the functional area for users or groups who will receive notifications. This value could be used for evaluation order, as explained in "Evaluation Methods" on page 4-14. This value will also be used to organize the PQM user's workflow selections.

Conditions There may be times when who you want to notify will differ based on specific specification attributes.

Conditions added to a row must be met in order for that group or individual to be notified and/or available for user selection. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

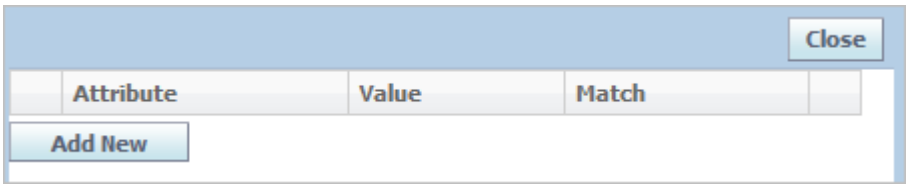
- **Action Type**—The type of action.
- **Audit Result**—The result of the audit.
- **Audit Type**—The type of audit.
- **Issue Type**—The type of issue.
- **Product Lines**—The product line affected by the action, audit, or issue.
- **Resolution**—The resolution of the issue.
- **Severity**—The severity of the issue.
- **User Groups**—The user group associated with the action, audit, or issue.
- **User Roles**—The user roles assigned to a user who will be notified of the action, audit, or issue.

Multiple conditions can be used to model more complex notification disbursement. For example, if the PQM Issue Resolution was a "Label Change" and the severity is S1, then users in the "Compliance and Regulatory" group should be notified.

To add conditions:

1. With the row in edit mode, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 4–12 shows.

Figure 4–12 Conditions dialog box



2. Click **Add New**. A dialog box displays available attributes.
3. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
4. Click the edit icon to place the row in edit mode.
5. Click the add data icon to define the Value column.
6. Select an option from the **Match** drop-down list.
7. Click the apply changes icon to apply your changes.
8. Click **Save**.

Members Select the users or groups who will be sent notifications. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups that will receive notifications.

To add users and user groups as members, refer to the procedures "To add users as members:" on page 4-7 and "To add user groups as members:" on page 4-8.

Selection Modes

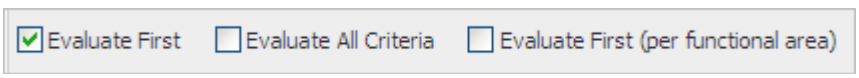
When moving an issue, action, or audit to the next workflow step, users could have the opportunity to select who receives notifications. Selection Mode allows you to control this process. Members displayed for selection will be organized by functional area. Choose a selection mode as follows:

- **All Members**—Choose this mode when you want all members to be automatically selected for the workflower.
- **One Member**—Choose this mode to allow the workflower to only select one member.
- **Multiple Members**—Choose this mode to allow the workflower to select multiple members.

Optional Select this checkbox to make the workflower's selection optional.

Evaluation Methods

Figure 4–13 Evaluation method options



Below the table are evaluation method options. These selections tell WFA how to evaluate the owners table.

- **Evaluate First**—Evaluates each row in order and use the first row where the conditions are met, ignoring all other rows.
- **Evaluate All Criteria**—Evaluates all rows and execute all that apply (provide a union set).
- **Evaluate First (per functional area)**—Groups rows by functional area, evaluate rows in order, executes the first one that applies, then skip to the next functional area (ignoring any remaining rows from the original functional area).

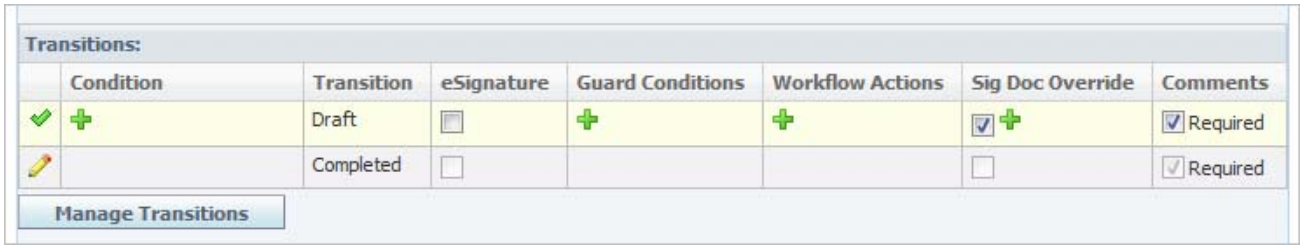
Transitions Table

Transitions answer the question, "Where can I go from here?" This section is used to set up which steps may be available for transition from the current step.

Predefined conditions can be placed on a particular transition to limit its availability based on specific criteria, as described in "Conditions" on page 4-16. Transitions can also be configured with a guard condition extensibility point that can programmatically determine if a workflow transition can occur, as described in "Guard Conditions" on page 4-18. Once the workflow transition does occur, workflow actions can be triggered to execute some process, as described in "Workflow Actions" on page 4-19.

A signature document workflow override is available. Owners are now sent an email notification as soon as one signature document has been workflowed to "Not Approved" instead of waiting for all signature documents to be completed. If multiple signature documents have been issued for an activity, audit or issue, the owner is sent an email notification as soon as one of the signature documents has been workflowed to "Not Approved". The workflow owner is sent the same email notification that is currently sent when all signature documents have been completed with one or more are "Not Approved".

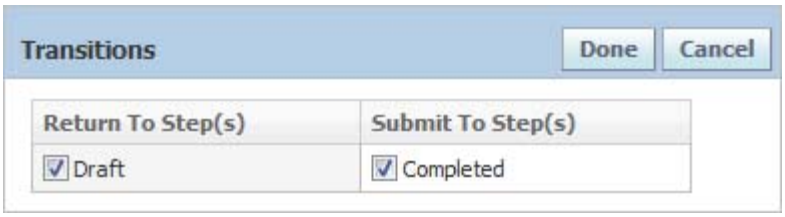
Figure 4–14 Transitions section



To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 4–15. This dialog box lists all steps that exist on the workflow template.

Figure 4–15 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

Conditions There may be times when "Who can do what and go where" conditions should differ, based on either user-specific attributes or issue, action, or audit attributes.

Conditions added to a transition must be met in order for the transition to appear as an option to the user. Depending on the workflow object selected, conditions can be based on the following attributes:

- **Action Type**—The type of action.
- **Audit Result**—The result of the audit.
- **Audit Type**—The type of audit.
- **Issue Type**—The type of issue.
- **Product Lines**—The product line affected by the action, audit, or issue.
- **Resolution**—The resolution of the issue.
- **Severity**—The severity of the issue.
- **User Groups**—The user group associated with the action, audit, or issue.
- **User Roles**—The user roles assigned to a user who will be notified of the action, audit, or issue.

Multiple conditions can be used to model more complex routing requirements. For example, if the user is in the group "Quality Managers" and the severity is S3, then the issue can be moved from Pending directly to Closed.

To add conditions:

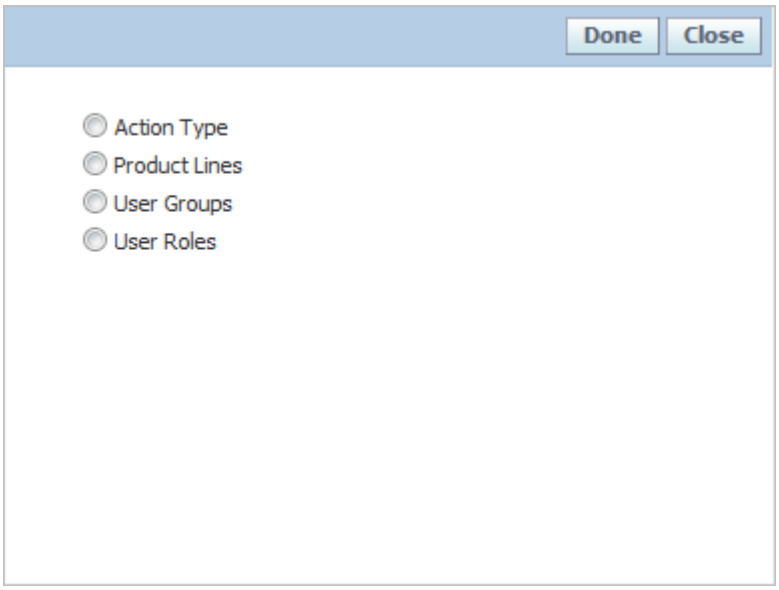
1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 4–16 shows.

Figure 4–16 Conditions dialog box



3. Click **Add New**. A dialog box displays available attributes, as Figure 4–17 shows.

Figure 4–17 Attributes for selected condition for an action



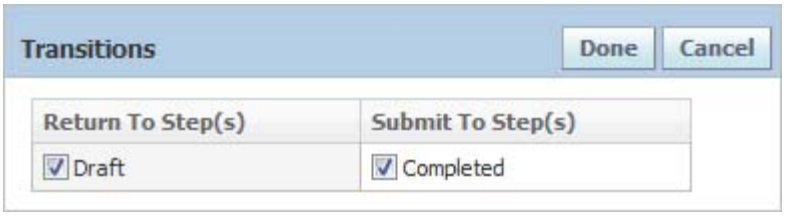
4. Select an attribute, then click **Done**. The selected attribute is appended as a new row in the conditions dialog box.
5. Click the edit icon to place the row in edit mode.
6. Click the add data icon to define the Value column.
7. Select an option from the **Match** drop-down list.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Transitions Transitions answer the question, "Where can I go from here?" Transitions designate which steps are available for transition from the current step.

To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 4–18. This dialog box lists all available active steps that exist on the workflow template for a particular step.

Figure 4–18 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

eSignatures eSignatures link transitions to the authentication process. For example, when transitioning a workflow from Review to Approved, you may select this checkbox to indicate re-authentication is required. Users also have to have eSignature passphrase enabled. See the "eSignature Passphrase Section" of the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Guard Conditions Guard Conditions are an extensibility point that launch classes to determine if a workflow transition can occur. The classes can access the item being workflowed to execute specialized validations programmatically, and either allow the transition to occur, or prevent it and return a list of error messages. These classes are made available for selection in WFA as Guard Conditions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file. Please see the *Agile Product Lifecycle Management for Process Configuration Guide* and the Agile Product Lifecycle Management for Process Extensibility Pack documentation for more details on WFA.

To add guard conditions:

1. Click the edit icon to place the row in edit mode, as Figure 4–19 shows.

Figure 4–19 Transitions row in edit mode



2. If authentication is required on the transition, check the **eSignature** field.
3. To add guard conditions, click the add data icon in the Guard Conditions column. WFA displays a dialog box listing configured guard conditions.
4. Select guard condition(s), and then click **Done**. The selected attribute is added to the Condition column in the Transitions row.

Workflow Actions Workflow actions are an extensibility point that trigger the execution of classes when a workflow transition occurs. The classes can access the item being workflowed to execute specialized actions programmatically. These classes are made available for selection as workflow actions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file.

An out of the box workflow action is available for PQM action workflows; "PQM Action - Complete Related Issues". When this workflow action is applied to a transition, all PQM issues directly related to the PQM action will be automatically workflowed to the status tagged with the "Complete" tag.

> **Note:** Issues already in a cancelled state will not be moved to "Complete". If the issue is related to more than one action then all actions must be in a state of "Complete" before the issue will be automatically workflowed.

The example below shows a sample transitions grid for the "Quality Manager Review" status. In this example, when the PQM action moves to the "Complete" status the related PQM issues will also move to the "Complete" status.

Figure 4–20 Workflow Actions



To add workflow actions:

1. With the row in edit mode, click the add data icon to define the **Workflow Actions** column. The workflow actions dialog box is displayed.
2. Select workflow action(s), and then click **Done**. The selected attribute is added to the Workflow Actions column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

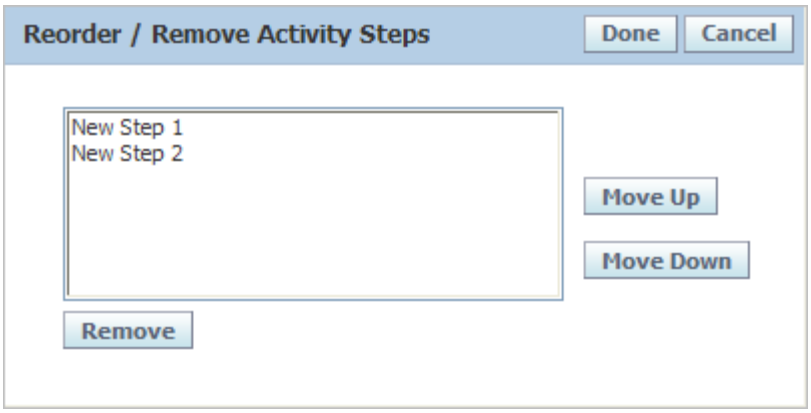
Adding Steps

Click **Add New Step** to add steps to the workflow process template. You can add as many steps as needed.

Reordering and Removing Steps

Click **Reorder / Remove Steps** to reorder or remove workflow steps. Agile PLM for Process displays the Reorder / Remove Activity Steps dialog box, as Figure 4–21 shows.

Figure 4–21 Reorder / Remove Activity Steps dialog box



To reorder a step:

1. Click the step to move.
2. Click **Move Up** or **Move Down** to set the desired order.
3. Repeat steps 1 and 2 for other steps.
4. Click **Done**. The dialog box closes. The steps on the Create Process Template page reflect the order that you set.

To remove a step:

1. Click the step to remove.
2. Click **Remove**. The step is removed from the dialog box.
3. Click **Done**. The dialog box closes. The step that you removed no longer is included on the Create Process Template page.

Steps can only be removed if the template has never been saved. If you want to remove a step after a template has been saved, inactivate the step.

Warning: Reordering and inactivating steps can result in serious consequences and issues for the workflow process template.

Permissions Section

Permissions are used to manage read and write access to the issue, action, or audit. Permissions reside in the Permissions table, shown in Figure 4–22, and govern:

- What actions can be performed (Read or Write)
- When they can be performed (by Status/Step)
- By whom they can be performed (Users or Groups)

> **Note:** The section level editing feature once denoted by the Type column is being deprecated in a future release. This feature is now configurable, and by default is configured off.

Figure 4–22 Permissions table



To add a permission:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon.
3. Define the permission using the **Action**, **Principal**, and **Criteria** fields as described below and ending on on page 4-23.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Actions From the drop-down list, select what permission you are granting. Choices are "Read" or "Write."

Principals Select the users or groups who will be assigned permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups.

To add users or user groups as members, follow the procedures "To add users as members:" on page 4-7 and "To add user groups as members:" on page 4-8.

Tokens

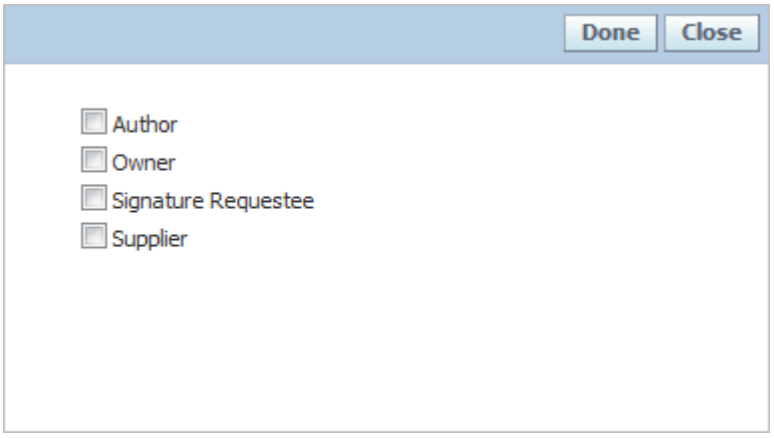
You can add one of several tokens as a principal. The following token choices are available:

- **Author**—The originator of the PQM object
- **Owner**—A workflow participant assigned as an owner
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the PQM object
- **Supplier**—The supplier users associated to the companies and/or facilities associated to the issue, action or audit in the Suppliers section.

To add tokens to the Permissions table:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 4-7.
5. Click **Done**. The token dialog box displays, as Figure 4–23 shows:

Figure 4–23 Tokens dialog box, Permissions



6. Assign a token by clicking the **Author**, **Owner**, **Signature Requestee**, or **Supplier** checkbox. You can make multiple selections.
7. Click **Done**. The users and assigned tokens are added to the Principal field, as Figure 4–24 shows.

Figure 4–24 Added tokens



8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria

Designate which step(s) the principal has the selected permission for. For example, the owner only has edit rights to the issue, action, or audit when its in the Review step.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

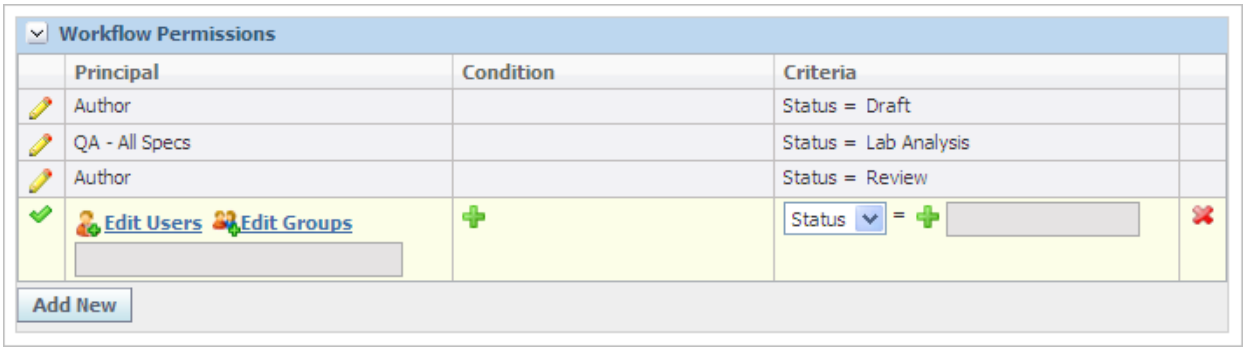
To quickly create permissions click **Generate**. This action will create default permissions. The Generate option overwrites any manual permission entries.

> **Note:** Section level editing can be configured on or off. Refer to the *Agile Product Lifecycle Management for Process Configuration Guide* for more information on this extensibility point.

Workflow Permissions Section

In addition to read and write permissions above, you can also set who has workflow permissions. Workflow permissions are used to manage workflow rights, meaning which users can transition a workflow on a PQM issue, action, or audit.

Figure 4–25 Workflow Permissions table



To add a workflow permission:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.

2. Click the edit icon.
3. Define the permission using the **Principal**, **Condition**, and **Criteria** fields as described below and through page 6-31.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Principal Select the users or groups who will be assigned workflow permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups. The token of "Author", "Signature Requestee", and "Supplier" can also be added as a principal. These tokens represent the issue, action, or audit's author, signature requestee(s) and suppliers.

To add users or user groups as members, follow the procedures "To add users as members:" on page 4-7 and "To add user groups as members:" on page 4-8.

Tokens

The token of "Author", "Signature Requestee", and "Supplier" can also be added as a principal. Users but not user groups can be assigned. The following token choices are available for workflow permissions:

- **Author**—The originator of the issue, action, or audit
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the issue, action, or audit
- **Supplier**—The supplier users associated to the companies and/or facilities associated to the issue, action or audit in the Suppliers section

To add tokens to the Workflow Permissions table:

1. With the page in edit mode, click **Add New** in the Workflow Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 6-13.
5. Click **Done**. The token dialog box displays, as Figure 4–26 shows:

Figure 4–26 Token dialog box, Workflow Permissions



6. Assign a token by selecting **Author**, **Signature Requestee**, or **Supplier**. You can make multiple selections.
7. Click **Done**. The users and assigned tokens are added to the **Principal** field.

8. Click the apply changes icon to apply your changes.
9. Click **Save**.

> **Note:** You can also add tokens to existing users.

Conditions There may be times when "Who can workflow and when" conditions should differ, based on either user-specific attributes or issue, action, or audit attributes.

Conditions added to the Workflow Permissions table must be met in order for the Workflow button to appear as an option to the user. Depending on the workflow object selected, conditions can be evaluated based on the following attributes:

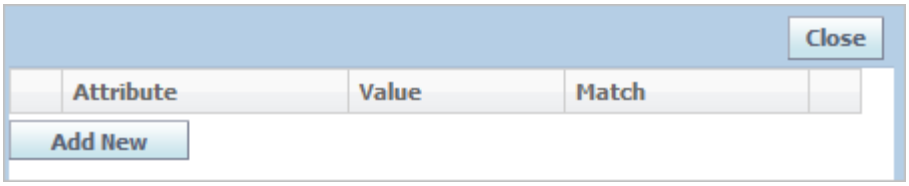
- **Action Type**—The type of action.
- **Audit Result**—The result of the audit.
- **Audit Type**—The type of audit.
- **Issue Type**—The type of issue.
- **Product Lines**—The product line affected by the action, audit, or issue.
- **Resolution**—The resolution of the issue.
- **Severity**—The severity of the issue.

Multiple conditions can be used to model more complex workflow permissions.

To add conditions:

1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Condition column. The conditions dialog box is displayed, as Figure 4–27 shows.

Figure 4–27 Conditions dialog box



3. Click **Add New**. A dialog box displays available attributes, shown in Figure 4–28.

Figure 4–28 Attributes for selected condition, Action



4. Select an attribute, and then click **Done**. The selected attribute is appended as a new row in the Conditions dialog box.
5. Click the edit icon to place the row in edit mode.
6. Click the add data icon to define the **Value** column.
7. Select an option from the **Match** drop-down list.
8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria Designate which step(s) are impacted by the selected permission. For example, the author only has workflow rights to the issue, action, or audit when it is in the "Draft" and "Review" step.

You are allowed to set up different steps with same status (same PKID). When setting up criteria in Workflow Permissions, the same status will only list once in the status selection list. However, once you set up a status that is used more than once in the steps, all the steps containing this status will apply with the permission criteria.

5

Using WFA to Manage CSS Workflows

This chapter contains instructions for using the Workflow Administration (WFA) application to create workflows in Content Synchronization and Syndication (CSS). Topics in this chapter include:

- Introducing CSS Workflows
- Creating New CSS Workflow Templates

Introducing CSS Workflows

CSS workflows govern the way specification information is syndicated to other systems. When a Transactive Item Publication (TIP) is added to a specification, that TIP has its own workflow, which is configured here.

CSS workflows are partially system controlled: As a TIP is syndicated by CSS, the CSS system is controlling the workflow status of the TIP, automatically transitioning the TIP's workflow status to indicate if it has been transmitted, received, etc. Since the process of syndicating that TIP is managed by the system, several specific workflow steps are required in the workflow and should not be modified. When a TIP is transitioned into the first of these required steps, the system will manage the rest of the transitions through the required step sequences. It is strongly advised to not modify any of these required steps for a CSS workflow. The steps before or after these required steps can be added and modified as needed.

Predefined Workflows

Two default CSS workflows are provided for use: Default GDSN CSS Workflow Template and Default Internal Syndication Workflow Template. The system process differs slightly for internal and external syndications, so some of the required steps are different.

- **Default GDSN CSS Workflow Template**—Used for external syndication to 1SYNC. Required steps are: Staged for Syndication, Syndication, Awaiting Response, Active, Active-Accepted, Active-Rejected, Failed. The transitions between these required steps should not be modified. Transitions from and to other (non-required) steps can be modified.
- **Default Internal Syndication Workflow Template**—Used for internal systems syndication. Required steps are: Staged for Syndication, Syndication, Awaiting Response, Active, Failed. The transitions between these required steps should not be modified. Transitions from and to other (non-required) steps can be modified.

When configuring a CSS workflow, it is strongly recommended to create a copy of these default templates and then modify the copy as needed.

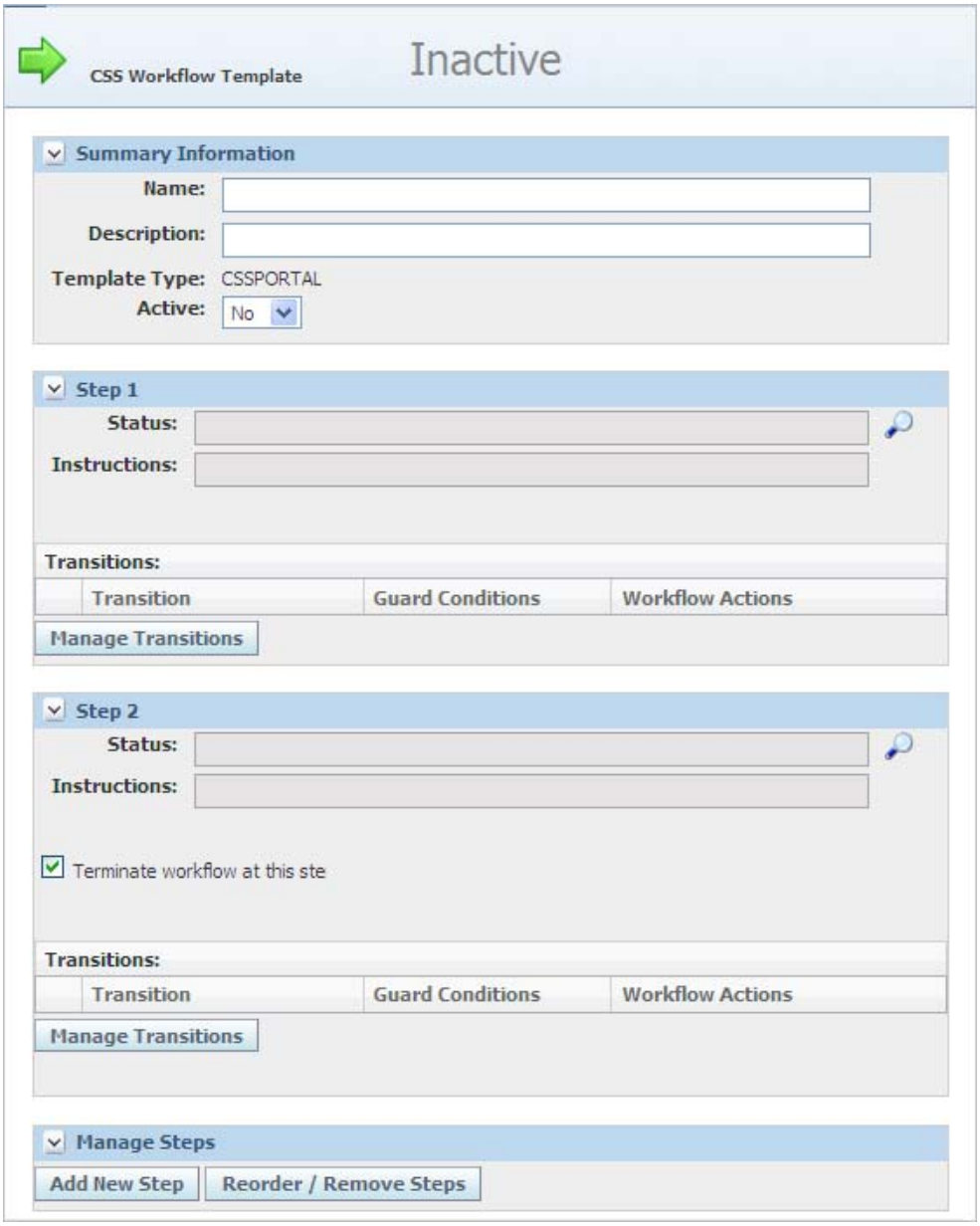
CSS workflows are tied to publication paths using a widget included in the Data Administration Toolkit. For instructions, refer to the *Agile Product Lifecycle Management for Process Data Administration Toolkit User Guide*.

Creating New CSS Workflow Templates

To create a new CSS workflow template:

1. Click **WFA** on the left navigation panel.
2. Click **New > CSS Portal Workflow Template** in the action menu. Agile PLM for Process displays a new workflow template page, as shown in Figure 5–1.

Figure 5–1 CSS Workflow Template page



3. Enter information described in:

- "Summary Information Section" on page 5-3
- "Step Sections" on page 5-3
- "Workflow Permissions Section" on page 5-7
- "Permissions Section" on page 5-8

4. Click **Save & Close**.
5. Flush the Workflow Cache Group, as described in "Reference Cache" on page 6-1.

Summary Information Section

Enter the following workflow information in the Summary Information section:

Name Enter a unique name for the workflow. This name will appear to the CSS user when resolving a TIP to a workflow. It is also shown on a specification as the Current Workflow value on the Approval/Audit Trail tab. This is a required field.

Description Enter a description for the workflow. This description will appear to the CSS user when resolving a TIP to a workflow. This is a required field.

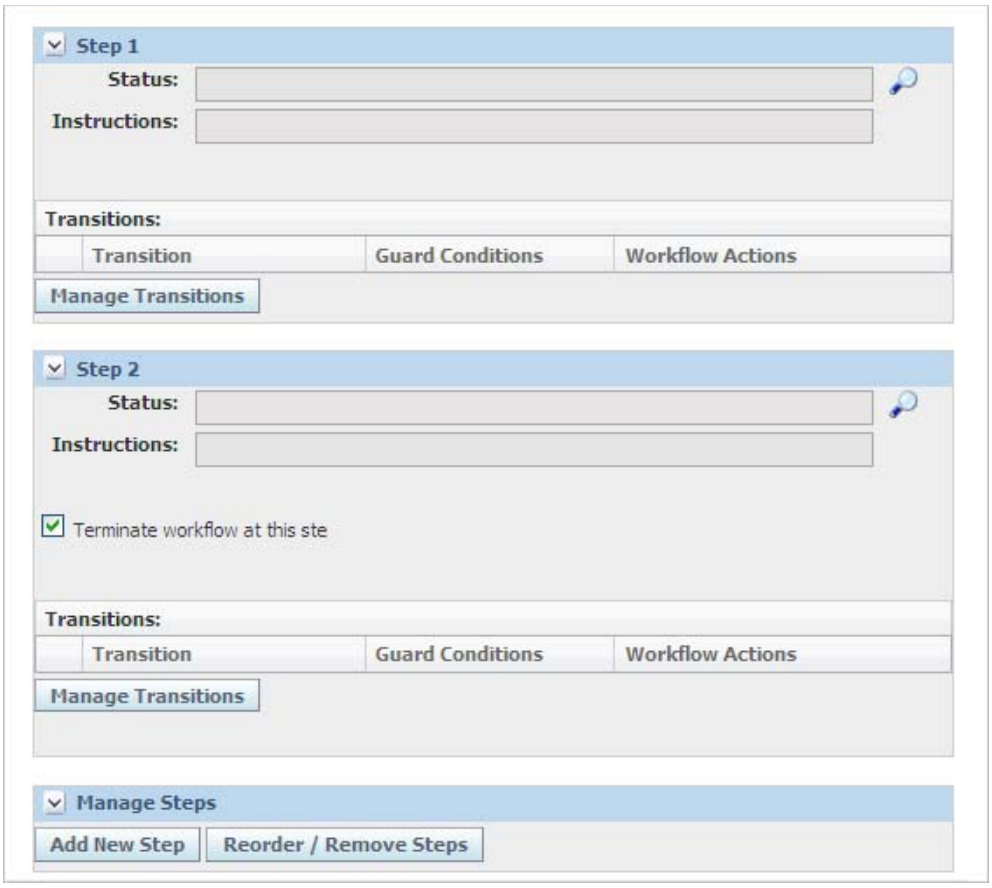
Template Type This field represents the type of workflow template. There are four types of workflows: GSM, SCRM, PQM and CSS.

Active Select **Yes** to make the template active when the workflow template is ready to become available for use in Agile PLM for Process. Otherwise, the template will remain inactive and not available for general use.

Step Sections

Each workflow template must have a minimum of two steps, as represented in the Step 1 and Step 2 sections. You can add more step sections by clicking **Add New Step**. By default, Step 2 is set as the last step in the workflow, as indicated by the "Terminate workflow at this step" box. Un-check this box as needed.

Figure 5–2 Steps sections



To define steps:

1. Define the **Status** by clicking the search icon. A Select Status dialog box displays. Choose from the list of statuses. Workflow process templates contain only a small number of statuses, since statuses, once created, are permanent.

   Note: Give each status a unique status name. Status names should also be common and applicable across all workflows. Status names cannot be changed once the template is activated.

2. The **Instructions** field is populated with the instructions attached to the chosen status. If you create a new status, enter a new set of instructions for this field.
3. If needed, check **Terminate workflow at this step** box to end the workflow at this step. This setting indicates that no further steps are required.
4. Click **Save**. If needed, add more steps by clicking **Add New Step** and repeating this procedure.

Transitions Table

This section is used to set up which steps may be available for transition from the current step. Transitions can be configured with a guard condition extensibility point that can programmatically determine if a workflow transition can occur, as described in "Guard Conditions" on page 5-5. Once the workflow transition does occur, workflow actions can be triggered to execute some process, as described in "Workflow

Actions" on page 5-6. Figure 5–3 shows the Transitions table.

Figure 5–3 Transitions section

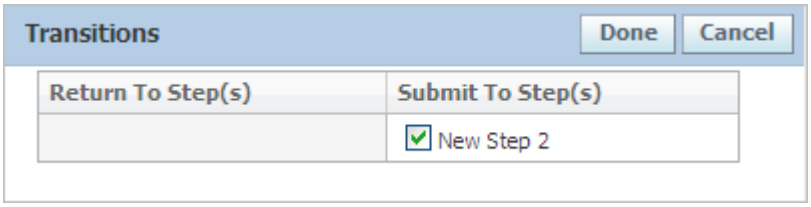


Transitions Transitions answer the question, "Where can I go from here?" Transitions designate which steps are available for transition from the current step.

To add transitions:

1. Click **Manage Transitions**. This opens the Transitions dialog box, shown in Figure 5–4. This dialog box lists all available active steps that exist on the workflow template for a particular step.

Figure 5–4 Transitions dialog box



2. Select all the steps that the active step can move back to in the Return To Step(s) column.
3. Select all the steps that this step can move forward to in the Submit To Step(s) column.
4. Click **Done**.
5. Click **Save**.

Guard Conditions Guard Conditions are an extensibility point that launch classes to determine if a workflow transition can occur. The classes can access the item being workflowed to execute specialized validations programmatically, and either allow the transition to occur, or prevent it and return a list of error messages. These classes are made available for selection in WFA as Guard Conditions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file. Please see the *Agile Product Lifecycle Management for Process Configuration Guide* and the Agile Product Lifecycle Management for Process Extensibility Pack documentation for more details on WFA.

To add guard conditions:

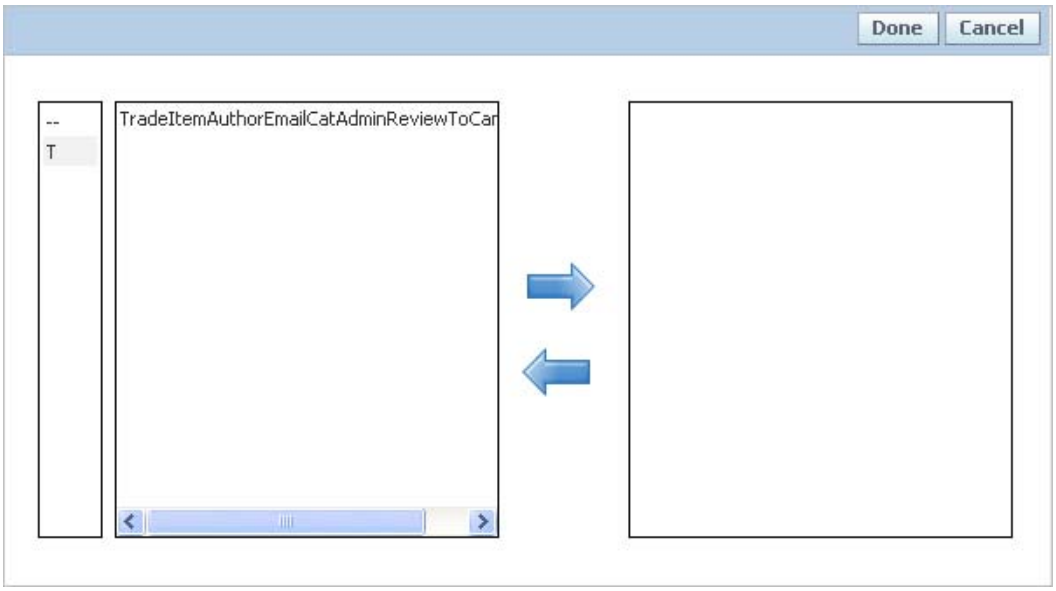
1. Click the edit icon to place the row in edit mode.
2. To add conditions, click the add data icon in the Guard Conditions column. WFA displays a dialog box listing configured guard conditions.
3. Select guard condition(s), and then click **Done**. The selected attribute is added to the Guard Conditions column in the Transitions row.

Workflow Actions Workflow actions are an extensibility point that trigger the execution of classes when a workflow transition occurs. The classes can access the item being workflowed to execute specialized actions programmatically. These classes are made available for selection as workflow actions by including them in the `config\Extensions\WFAExtensionsConfig.xml` file.

To add workflow actions:

1. With the row in edit mode, click the add data icon to define the Workflow Actions column. The workflow actions dialog box is displayed, as Figure 5–5 shows.

Figure 5–5 Workflow Actions dialog box



2. Select workflow action(s), and then click **Done**. The selected attribute is added to the Workflow Actions column in the Transitions row.
3. Click the apply changes icon to apply your changes.
4. Click **Save**.

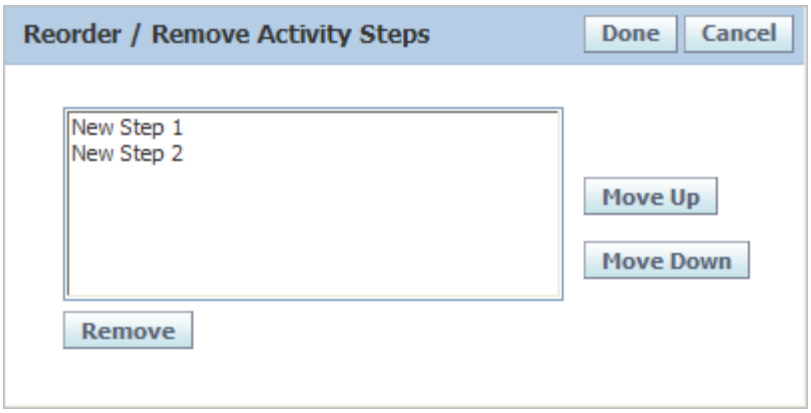
Adding Steps

Click **Add New Step** to add steps to the workflow process template. You can add as many steps as needed.

Reordering and Removing Steps

Click **Reorder / Remove Steps** to reorder or remove workflow steps. Agile PLM for Process displays the Reorder / Remove Activity Steps dialog box, as Figure 5–6 shows.

Figure 5–6 Reorder / Remove Activity Steps dialog box



To reorder a step:

1. Click the step to move.
2. Click **Move Up** or **Move Down** to set the desired order.
3. Repeat steps 1 and 2 for other steps.
4. Click **Done**. The dialog box closes. The steps on the Workflow Template page reflect the order that you set.

To remove a step:

1. Click the step to remove.
2. Click **Remove**. The step is removed from the dialog box.
3. Click **Done**. The dialog box closes. The step that you removed no longer is included on the Workflow Template page.

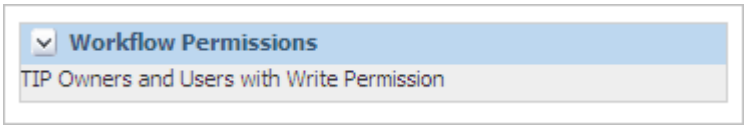
Steps can only be removed if the template has never been saved. If you want to remove a step after a template has been saved, inactivate the step.

> **Warning: Reordering and inactivating steps can result in serious consequences and issues for the workflow process template. Do not remove steps from a CSS workflow that are required for syndication.**

Workflow Permissions Section

This read-only section displays CSS workflow permissions, as Figure 5–7 shows.

Figure 5–7 Workflow Permissions section



Permissions Section

Permissions are used to manage read and write access to the publication. Permissions reside in the Permissions table, shown in Figure 5–8, and govern:

- What actions can be performed (Read or Write)
- When they can be performed (by Status/Step)
- By whom they can be performed (Users or Groups)

Figure 5–8 Permissions table



To add a permission:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon.
3. Define the permission using the **Action**, **Principal**, and **Criteria** fields as described below.
4. Click the apply changes icon to apply your changes.
5. Click **Save**.

Actions From the drop-down list, select what permission you are granting. Choices are "Read" or "Write."

Principals Select the users or groups who will be assigned permissions. Click **Edit Users** to locate individual users and click **Edit Groups** to locate groups.

Tokens

You can add the token of "Author," "Owner," or "Signature Requestee" as a principal. The following token choices are available:

- **Author**—The originator of the TIP
- **Owner**—A workflow participant assigned as an owner
- **Signature Requestee**—A workflow participant assigned as a signature requestee for the specification

To add tokens to the Permissions table:

1. With the page in edit mode, click **Add New** in the Permissions section.
2. Click the edit icon to the left of the new role.
3. Click **Edit Users**. The user search page displays.
4. Search for and select users as described on page 5-8.
5. Click **Done**. The token dialog box displays, as Figure 5–9 shows:

Figure 5–9 Tokens dialog box, Permissions



6. Assign a token by clicking the **Author**, **Owner**, or **Signature Requestee** checkbox. You can make multiple selections.
7. Click **Done**. The users and assigned tokens are added to the Principal field, as Figure 5–10 shows.

Figure 5–10 Added tokens



8. Click the apply changes icon to apply your changes.
9. Click **Save**.

Criteria Designate which step(s) the principal has the selected permission for. For example, the owner only has edit rights to the specification when it is in the Review step.

To quickly create permissions, click **Generate**. This action will create default permissions. The Generate option overwrites any manual permission entries.

6

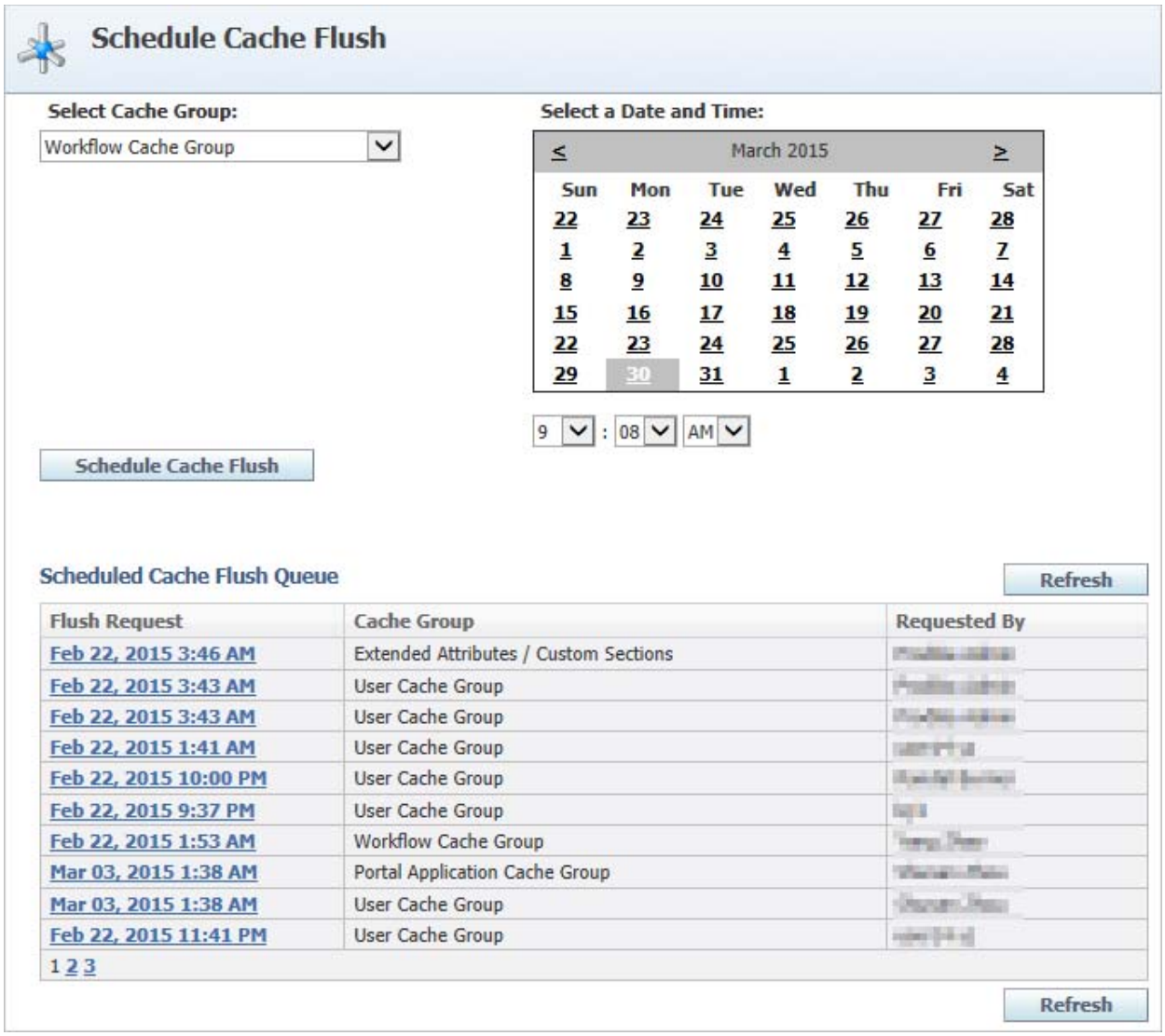
Reference Cache

This chapter outlines WFA-related cache tasks. For full details around cache management, see the CACHE chapter of the *Agile Product Lifecycle Management for Process Administrator User Guide*.

WFA Cache

Figure 6–1 below shows the WFA option for CACHE. Select the **Workflow Cache Group** option from the Select Cache Group drop-down list, and then click **Schedule Cache Flush** to flush the workflow cache after you have made workflow changes using the WFA application.

Figure 6–1 Workflow Cache Group



A

Controlling Visibility Using Tags

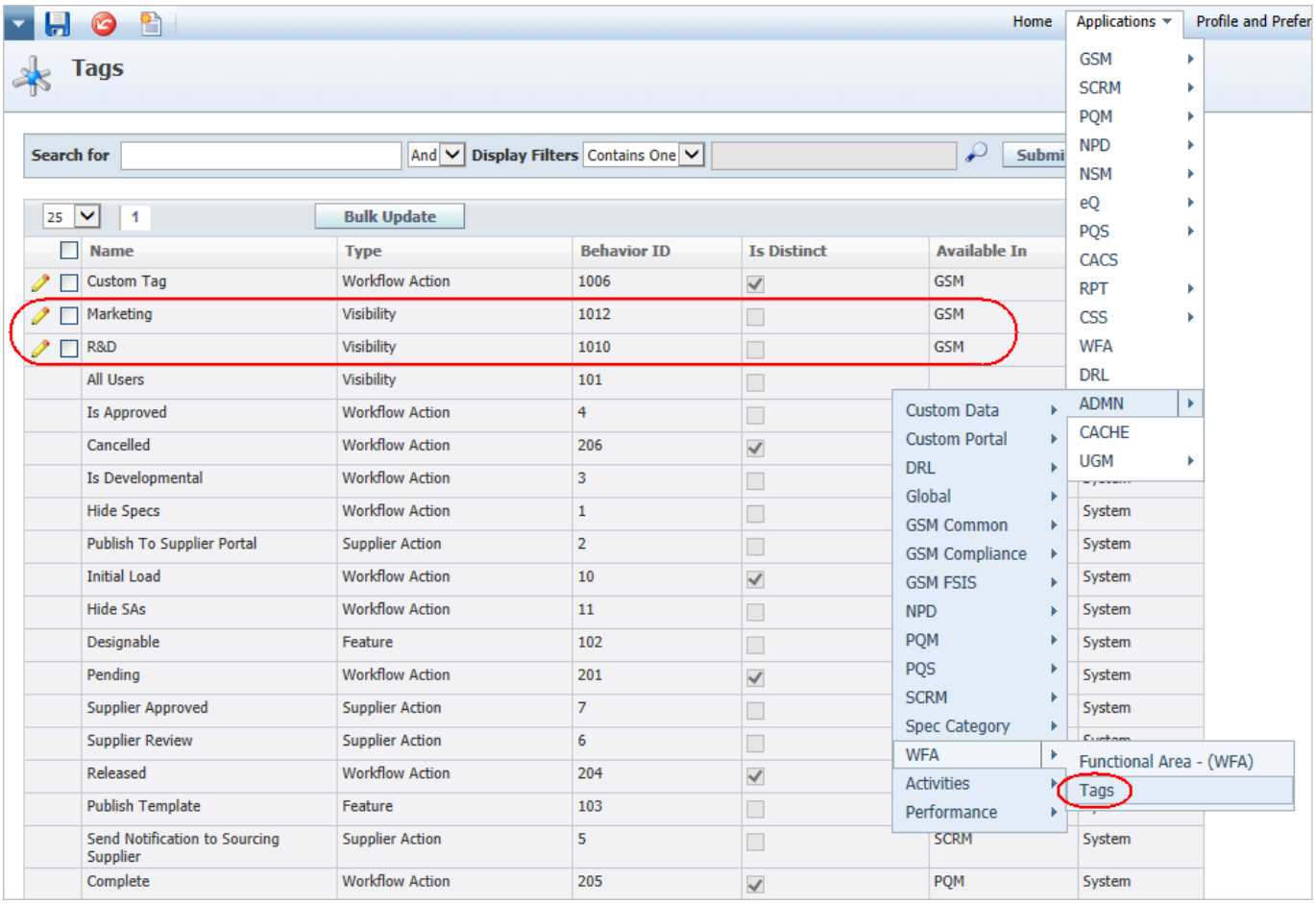
Overview

Visibility tags are used in GSM specifications, SCRM sourcing approvals, and PQM issues, actions, or audits to filter search results by adding visibility tags to workflow steps. This functionality is beneficial when you want to limit search results for certain UGM user groups.

Use Case

Let's take GSM specifications as an example. Specifications can be filtered out of GSM search results by adding visibility tags to workflow steps. For example, users in the "Marketing" group are only interested in trade specifications when they are in an Approved state, while the "R&D" group are interested in trade specifications in all statuses. To accomplish this behavior, two visibility tags need to be created -- R&D and Marketing. These tags would be created in ADMN, as described in the *Agile Product Lifecycle Management for Process Administrator User Guide*. See Figure A–1 for an example of accessing tags in ADMN.

Figure A–1 Creating tags in WFA



In WFA, on the GSM workflow template, "R&D" would be a tag applied to all steps in the workflow, while the "Marketing" tag would only be applied to the "Approved" step.

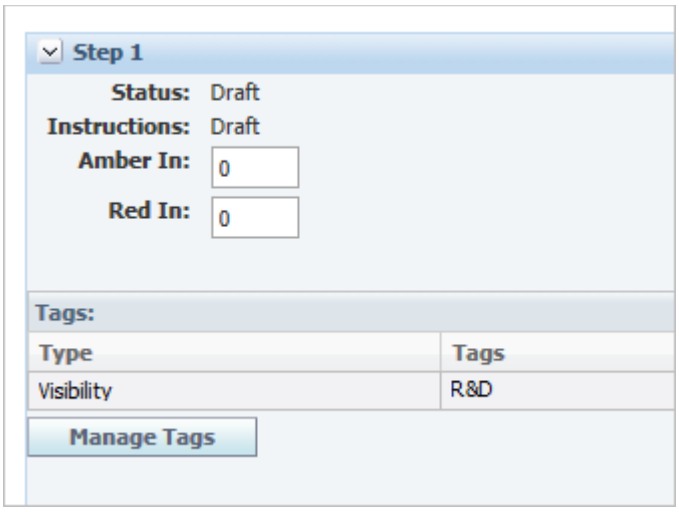
In UGM, you would associate the "R&D" tag to the R&D user groups and the "Marketing" tag to the Marketing user groups. See the "Workflow Visibility Tags Section" in the *Agile Product Lifecycle Management for Process User Group Management User Guide* for more information.

Warning: These tags only control EQT search result filtering. They do not control read or edit permissions to the business object. WFA permissions should be used to control permissions.

Perform a CACHE flush for the "Admin Data Cache Group" as described in the *Agile Product Lifecycle Management for Process Administrator User Guide*.

In WFA, add the "R&D" visibility tag to appropriate workflows. If one or more visibility tag is in place only users assigned to groups associated with these visibility tags can view specifications in this status.

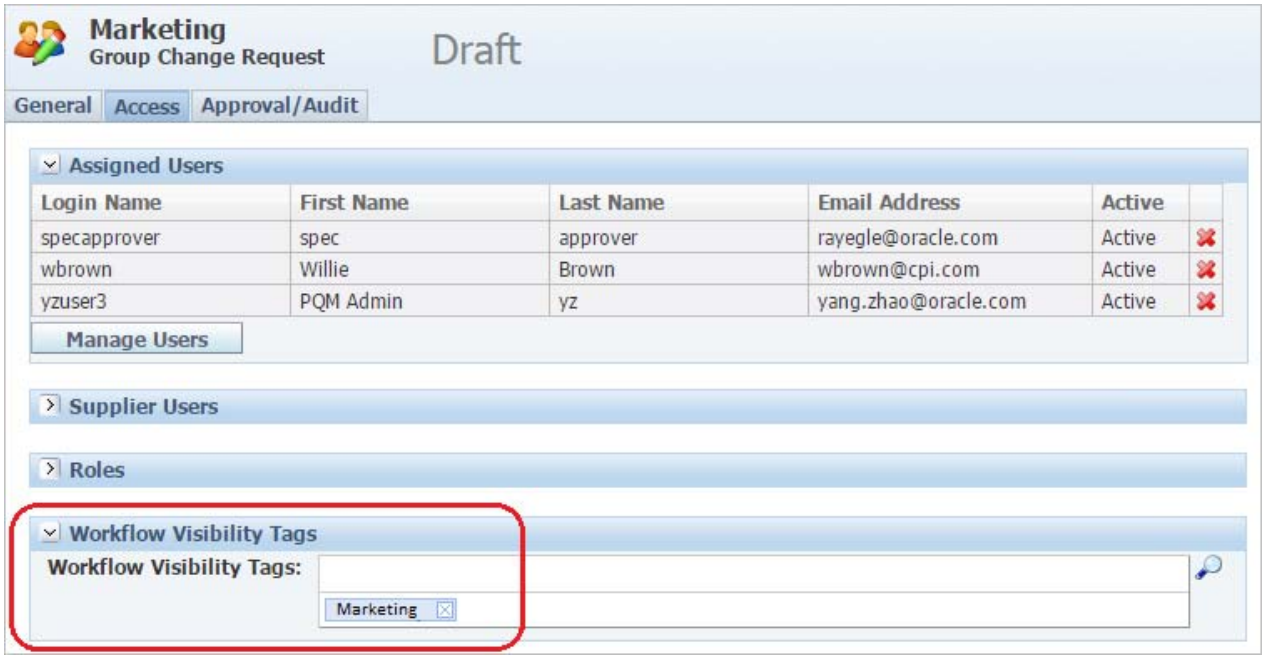
Figure A–2 Added visibility tag in GSM workflow template



Perform a CACHE flush for the "Admin Data Cache Group" as described in the *Agile Product Lifecycle Management for Process Administrator User Guide*.

In UGM, you would associate the "R&D" tag to the R&D user groups and the "Marketing" tag to the Marketing user groups. Additional information about visibility can be found in the *Agile Product Lifecycle Management for Process Security Configuration Guide*.

Figure A–3 Workflow Visibility Tags section



Perform a CACHE flush for the "User Cache Group".

Now when users search for specifications they may have limited visibility due to visibility tags. As seen in Figure A–4, these two specifications resolved to a workflow where the R&D visibility tag is assigned to the "draft" status.

If either of these specification are resolved to a different workflow that is not associated to the tag or if the specification transitions to a status that is not associated with the tag, then visibility will change.

Figure A–4 As seen by a user associated to the R&D Group

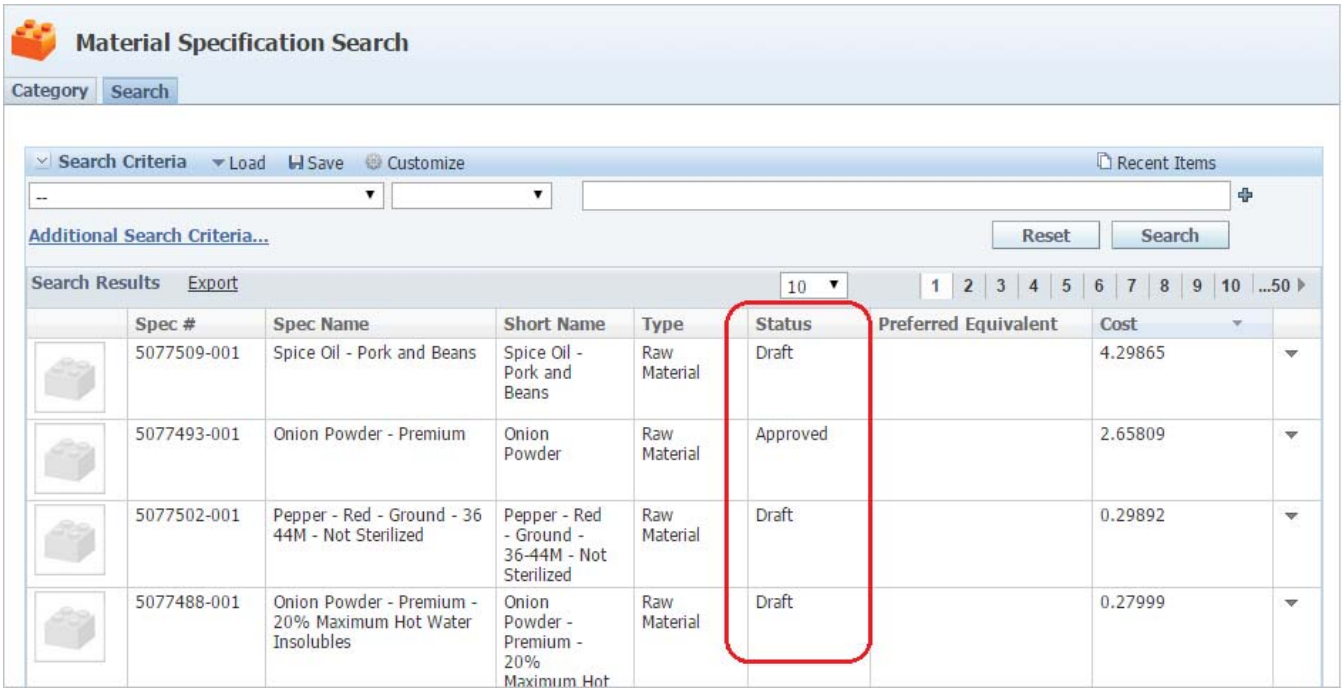
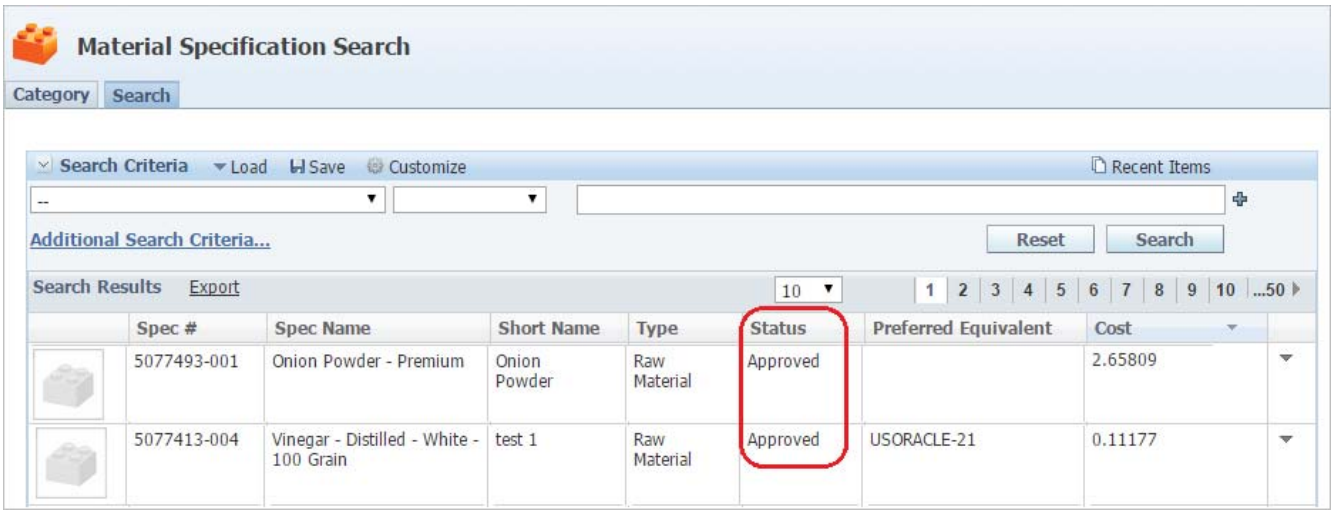


Figure 6–2 As seen by a user that is associated with the Marketing Group



Warning: These tags only control EQT search result filtering. They do not control read or edit permissions to the specification. WFA permissions and/or BU security should be used to control permissions.