Pharmacy Enterprise Customization System (PECS)

User Guide

Version 6.0.01

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Department of Veterans Affairs

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Document Control Section

Revision History

Date	Revised Pages	Patch Number	Description of Change
May 2016	All i, xvi 165 5, 6, 14, 46, 144 23, 81 126 39 135-139 4 6 7 3, 4 13 14 24 26-28 38 43 53 62 76 84, 85 94 95, 96, 122, 128 132 153 158	PREC*6.0*1	Removed periods from description, edited for 508 conformance Date, Footer updated, Corrected Page number Removed extra text Adjusted bullets on lists for consistency Removed blank page Added blank page Removed extra space Adjusted bullets Formatted cross-references as hyperlinks Updated punctuation on bulleted lists Capitalized drug names Added SFTP to acronyms Replaced FTP with SFTP Updated WebLogic version Adjusted hyphens, text edit Removed periods Added word, text edit Removed extra space Text edit Removed extra space, text edit Revised text to clarify Text edit Removed extra space Revised text to clarify Removed extra space Added apostrophe Revised text to clarify Removed extra space Brian Holihan, Susan Heiress
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11/17/2014	2 6 8 12 14 19 30 34 51, 60, 62 16 All 89, 124 47-49 All vii ix – xiv xv - xviii	PREC*5.0*1	Updated link Removed extra text Removed extra text Removed asterisk Switched spell-out of DDI to first use Removed extraneous parenthetical statement Provided definition for DRC Provided list of options Updated reference links Removed extraneous section Page numbers updated Changed section names so that the text would fit on the TOC Removed strange section of linked text causing multiple instances of the same text and graphics Updated referenced page numbers All references to FDB MedKnowledge Framework were reverted to FDB-DIF to correct an inaccuracy; the product name does not change until the 4.x series, not the 3.3 version of the FDB product deployed with PECS v5.0. Added blank page so that TOC starts on an odd page, separate from Revision History Updated TOC page numbers Updated List of Figures page numbers Brian Holihan

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02/11/2013	All	PREC*3.0*1	Updated for PECS 3.0 B Holihan
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02/07/2013	All	PREC*2.2*1	Updated Title Page to reflect Release month Updated Revision History order Updated Footer to include version number, release date. B Holihan
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06/12/2012	All	PREC*2.2*1	Updated to address Radu C comments of 06/11/12 B Holihan
05/31/2012	101-108	PREC*2.2*1	Entered nearly all of Joanne's comments re: FDB Comparison Reports. Marella Colyvas
05/23/2012	All	PREC*2.2*1	Updated TOC; changed some heading levels; replaced screen shots for Requestor & Approver home pages; adjusted pagination and section breaks Marella Colyvas
05/09/2012	61-62	PREC*2.2*1	Updated Quick Drug Pair selection. B Holihan
05/08/2012	84-85	PREC*2.2*1	Added screen capture to Null Drug Pair section; Reduced size of Custom Update samples Marella Colyvas
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05/04/2012	84-85	PREC*2.2*1	Added more information to Release Manager. Still needs better explanations of screen captures; added Null Drug Pairs write-up to Administrator Role (Julie's); added write-up on Quick Drug Pair Selection; added information about CCR5122 in User Guide in the Notification of Drug Pairs Needing Action for an Approved Drug-Drug Interaction section. Marella Colyvas
5/04/2012	39	PREC*2.2*1	Clarified the "Also note: If you wish to put a Drug-Drug Interaction (DDI) . . ." statement at the end of the Notification of Drug Pairs Needing Action for the Approved Drug-Drug Interaction section. Joanne Callahan
05/03/2012	2, 62	PREC*2.2*1	Added explanation of Custom Update File in Release Manager section; updated definition of Administrator on pages 2 and 62 (added fact they can initiate null drug pair removal). Updated write-up on Quick Drug Pair Selection Marella Colyvas
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4/12/2012	39; 75	PREC*2.2*1	More changes to Drug Pair Notification; added Release Manager write-up Marella Colyvas
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3/23/2012	39	PREC*2.2*1	Drafted Drug Pair Notification Marella Colyvas
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04/12/2011	All	PREC*2.2*1	Added edits from CPS. Marella Colyvas
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Date	Revised Pages	Patch Number	Description of Change
11/18/2010 CR 3391	All	N/A (First Release)	Edited changes requested by customer analyst prior to second (final) review by EIE Marella Colyvas
10/12/2010 CR 3391	All	N/A (First Release)	Updated elements found in Enterprise Infrastructure Engineering (EIE) review for Operational Readiness Testing (ORT) Marella Colyvas
4/14/2010	All	N/A (First Release)	Baseline Russell Chachula and Marella Colyvas

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1 Introduction

The Pharmacy Enterprise Customization System (PECS) is a Graphical User Interface (GUI) application that currently allows the VA's Pharmacy Benefits Management (PBM) pharmacists and Automated Data Processing Application Coordinators (ADPACs) to customize the contents of the following five business concepts:

- Drug-Drug Interaction
- Drug Pair
- Duplicate Therapy
- Dose Range
- Professional Monograph

1.1 Purpose

The purpose of this user guide is to provide a general overview of the PECS application, as well as more detailed working information. It also provides reference material and task-based instructions for entering and approving Drug-Drug Interaction, Drug Pair, Duplicate Therapy, Dose Range, or Professional Monograph Customization Requests.

1.2 Overview

When a VA provider orders a drug for a patient (either through CPRS [Computerized Patient Record System] or VistA), the Medication Order Check Healthcare Application (MOCHA) performs order checks on that drug, and alerts the provider if the drug they are ordering has any of the following anomalies:

- Causes an interaction with other drugs the patient is taking
- Is in the same Therapeutic Class as other drugs the patient is taking
- Is prescribed in a dose that is incompatible with patient factors such as age, weight and Body Surface Area (BSA)

The drug information used as a basis for these order checks comes from a Commercial Off the Shelf (COTS) product provided by First Databank (FDB) called the Drug Information Framework (FDB-DIF).

Sometimes, the information provided by FDB is not optimal for the VA Providers or the Veteran community they serve. The primary purpose of the Pharmacy Enterprise Customization System (PECS) is to give Pharmacy Benefits Management (PBM) the ability to customize the drug information provided by FDB so the order checks and resulting alerts are based on drug information tailored specifically for the VA.

The major users of PECS are Pharmacy Benefits Management (PBM) personnel and the Automated Data Processing Application Coordinators (ADPACs) who will research and request the customization of FDB data. Once approved by the National Drug File (NDF) committee members, the changes made will affect all of the VA sites throughout the country to where the data is sent and used in the enhanced order check. The order check is used by VA physicians and pharmacists to see if any serious drug conflicts occur with the patients' existing medication. It will also check for duplication of therapy of other prescribed drugs also taken by the VA patient.

The advantages to the VA for using PECS are as follows:

- All customizations will be performed at the National level to provide consistent order checks between facilities.

- Use of First Databank for drug interaction, duplicate therapy, and dosing data.
- More specificity in drug interaction order checks with the ability to include or exclude dose routes.
- More specificity in duplicate therapy order checks with FDB data.
- Weekly FDB updates with monthly customization updates.
- More frequent customization updates when needed.

1.3 Project References

This User Guide relies on the following documents, which can be found here:

http://vaww.oed.portal.va.gov/projects/pre/PRE_IPT_Rev/PRE_IPT_Rev_PECS/Lists/PECS%20v50%20Review/AllItems.aspx

> **Note:** Due to policy constraints, active links cannot be included in this document. Please copy and paste the URLs into your browser.

- PECS Requirements Specification Document (RSD)
- Pharmacy Reengineering (PRE) Configuration Management Plan (CMP)
- PECS Database Design Document
- PEPS Style Guide
- PECS Project Architecture Document
- PECS Interface Control Document
- PECS Production Operations Manual (POM)

1.3.1 Information

> **Note: Due to policy constraints, this document cannot support live links. Please copy and paste the links into your browser.**

Project contacts for PD PRE PECS project are as follows:

- Office of Information & Technology (OIT) Product Development (PD) Program Manager
- OIT PD Project Manager PECS
- Business Sponsor/Stakeholder
- Business Subject Matter Expert (SME)/Lead Clinical Analyst

The current names of those serving these roles can be found in the organization chart for PD PRE: Be sure to look at the tab for PECS:
http://vaww.oed.portal.va.gov/projects/pre/OverArching%20Documents/PRE_Organization_Chart_all%20tabs.pdf

These people can be contacted through the Global Address List (GAL).

1.3.2 Coordination

Any coordination activities that must occur will take place between the PBM group and their ADPACs. If something has to be escalated, the ADPACs will have specific procedures for each site.

1.3.3 Help Desk

Each site needs to use the help desk escalation that they normally use. Since each site is different, the only instructions for users are to go their ADPACs and to report issues.

See the Contact Us tab in the PECS Application for guidance.

1.4 Organization of the Manual

Introduction

An overview of the PECS system and this User Guide

System Summary

A more detailed description of the PECS system including a non-technical overview of the product design, data flow, and application access

Customization Information

Provides a brief overview of customizations and how they're created in PECS

Getting Started

Discusses logging into PECS and the organization of the application

PECS by Tab

PECS functions are organized into Tabs. PECS by Tab describes the tabs found in PECS

Using Advanced Query/Customization

Instruction on using Advanced Query/Customization feature

Working with Customization Requests

Instruction on how to create and process customization requests

User Roles and Tasks

Information on PECS User Roles and the functions they perform

Easy Search

Instruction on using the Easy Search feature

Drug Pair Lookup

Instruction on using the Drug Pair Lookup feature

Detail Pages

Description of the Detail Pages

Sample Modification Scenarios

Sample scenarios on why a record would be customized and the steps to make the customization

Contact Us

Information about the Contact Us page

Reports

Information about PECS Reports

1.5 Acronyms and Abbreviations

Acronyms and Abbreviations used in this document.

Table 1: Acronyms and Abbreviations

Term	Definition
ADPAC	Automated Data Processing Application Coordinator
AITC	Austin Information Technology Center
API	Application Program Interface
BSA	Body Surface Area
COTS	Commercial Off-the-Shelf
CPRS	Computerized Patient Record System
DATUP	Application that implements the FDB-DIF update business logic using the FDB Updater APIs to process the update file
FDB	First Databank
FDB-DIF	First Databank Drug Information Framework database
FTP	File Transfer Protocol
GCN	Generic Code Number
GUI	Graphical User Interface
J2EE	Java 2 Enterprise Edition
KAAJEE	Kernel Authentication and Authorization for J2EE
NDF	National Drug File
OIT/OI&T	Office of Information and Technology (verify which to use).
PBM	Pharmacy Benefits Management
PD	Product Development
PECS	Pharmacy Enterprise Customization System
PEPS	Pharmacy Enterprise Product System
PRE	Pharmacy Reengineering
RSD	Requirements Specification Document
SFTP	Secure File Transfer Protocol
URL	Uniform Resource Locator
VA	Department of Veterans Affairs
VAMC	VA Medical Center

Term	Definition
VistA	Veterans Health Information Systems and Technology Architecture
VPN	Virtual Private Network

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2 System Summary

The Pharmacy Enterprise Customization System (PECS) was born out of the need to support enhanced order checks. A decision was made to replace the home-grown order checking process, implemented in M, with a COTS product (FDB-DIF). However, the VA desired to be able to customize the drug information (such as drug interaction severity, monographs etc.) existing in FDB. PECS will satisfy this need, while adhering to stringent requirements intended to ensure patient safety.

The PECS application is designed with the following functionality:

- Allows customization of FDB data used in the enhanced order checking by National Drug File (NDF) Managers
- Provides access to GUI customization application by facility users to request custom changes
- Provides role based system accessibility
- Provides a report to list all customizations created to date compared against corresponding FDB standard reference data
- Provides a process to allow drug interaction information in VistA to be transferred to the custom tables
- Provides a process via Secure File Transfer Protocol (SFTP) to update from a national database to all local/regional instances of FDB standard and custom tables

PECS is developed to allow easy customization of FDB standard reference tables such as Duplicate Therapy, Dose Range, Drug-Drug Interaction, and Drug-Drug Interaction Professional Monograph, which are used in the enhanced order checking by the MOCHA system.

In more detail, PECS does the following:

- Allows users to customize the FDB standard reference tables used in the enhanced order checking that will be used by the Pharmacy Benefits Management (PBM) group, the Automated Data Processing Application Coordinators (ADPACs), and National Drug File (NDF) managers or designees to enter and update the custom table values.
- Allows users to do the following customizations:
  - A custom drug-drug interaction, and any important attributes for that interaction
  - Drug pairs associated with a custom drug-drug interaction
  - A custom Professional Monograph for a drug-drug interaction, including any important attributes
  - A custom duplication allowance value for a duplicate therapy class
  - Custom values for attributes associated with a custom dose range check table
- Provides a Searching capability for a user to see Drug-Drug Interaction, Duplicate Therapy, or Professional Monograph information separately or together, for chosen drugs.
- Provides the following reports:
  - History of custom changes for each of the five concepts
  - Exportable FDB or Custom Data - Individual query data can be exported from the five FDB-DIF or Custom tables. The available format is Excel
  - FDB Comparison Reports to compare incoming updated FDB data against VA customized data to help determine if the VA customized data needs to be modified
- Provides a process via SFTP to transfer Custom data from a National server to all local/regional instances servers.
- Leverages the existing FDB data loader utility at each site that is used to update the FDB-DIF databases.

Custom table content distribution involves using an automated utility, Data Update (DATUP). The distribution method supports the following data content scenarios:

- Only FDB standard reference table data.
- FDB standard reference table data and Custom table data.
- Only Custom table data.

Custom table content distribution supports both periodic and as-needed releases.

2.1 System Configuration

PECS is installed in two environments at the Austin Information Technology Center (AITC) in Austin, TX: Pre-Production and Production. The new PECS build, database changes (updates), security patches, etc., are first applied to PECS Pre-Production and then on successful deployment promoted to PECS Production.

2.1.1 Deployment Design – PECS

Figure 1 shows the overview of the logical deployment design for the PRE PECS Application.

Application Server

The WebLogic Application Server 12.1.1 will host PRE PECS and its business services.

Data Base Server

The Database Server software is Oracle 11g running on Red Hat Linux Enterprise version RHEL5. It will host the Custom Table Staging database and FDB-DIF database.

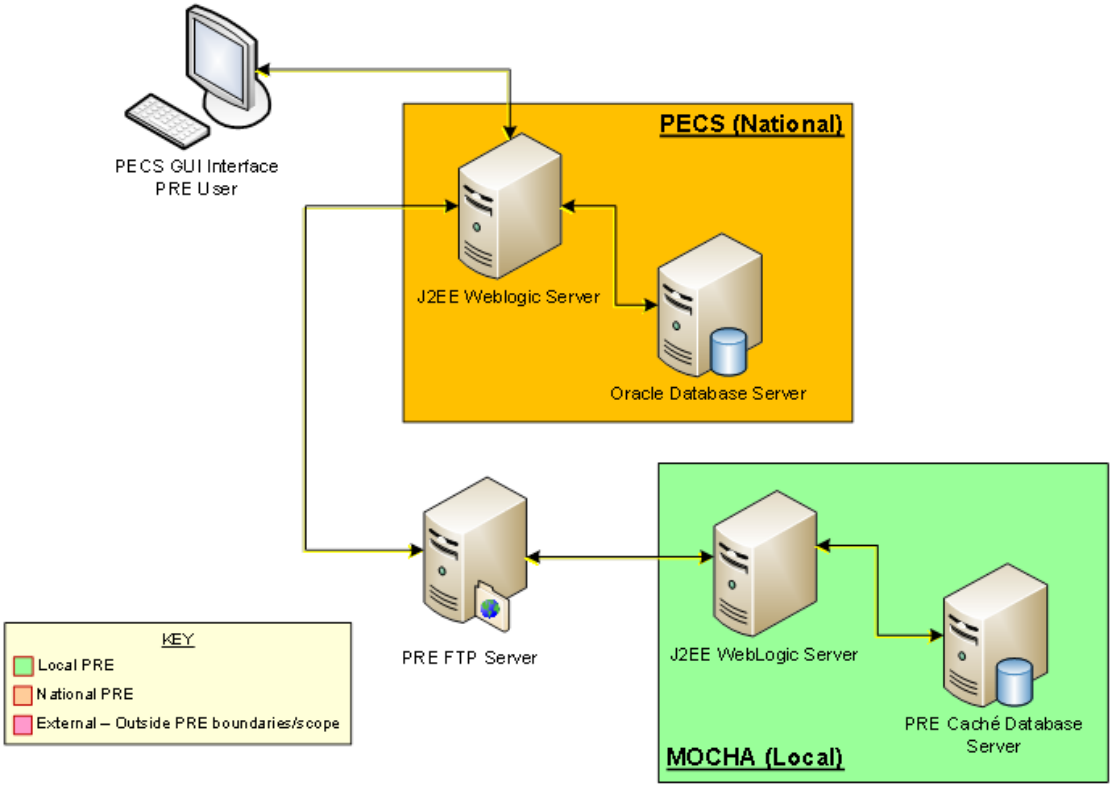
Failover Server

The Failover Server will host both the BEA WebLogic Application Server and Oracle Database Server to provide redundancy.

Legacy Interface

An existing VistA server will host legacy KAAJEE and VistALink interfaces.

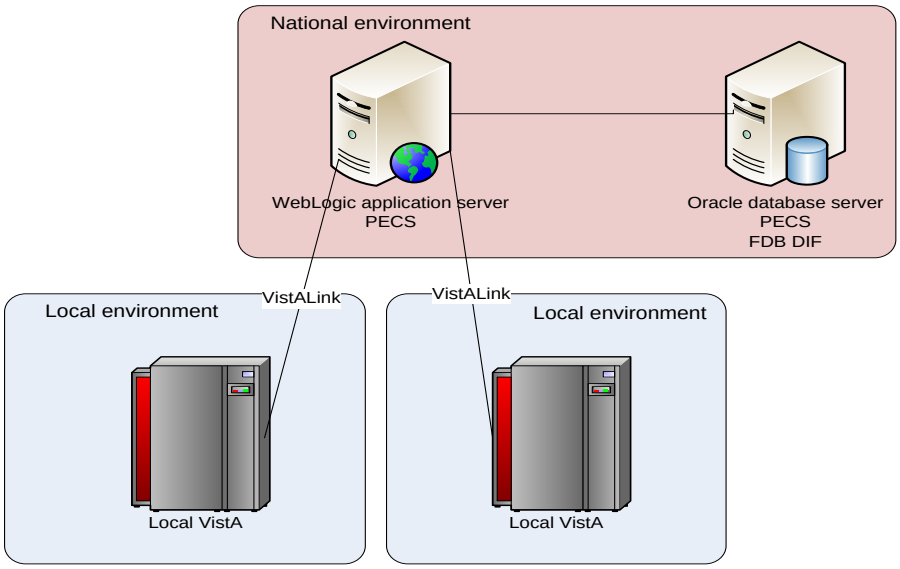
Figure 1: Logical Deployment Design for the PRE PECS Application



2.1.2 Hardware/Software Components

The Hardware/Software components and deployment architecture of the Pre-Production and Production environments are the same. The PECS Application and database are kept in synchronization for both.

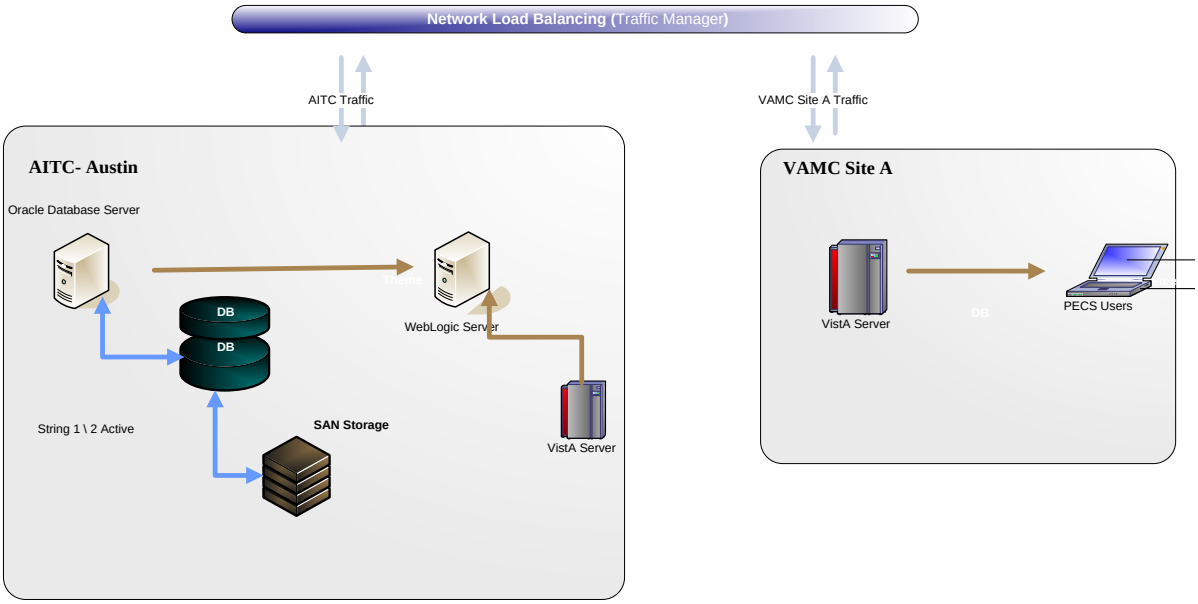
Figure 2: PECS High Level Deployment Design



2.1.3 Production Environment

Figure 3 shows the Production environment that will be supported, and the local networks to which they will be attached for Local VA Medical Centers (VAMC), where PECS users are located.

Figure 3: Production Environment for PECS

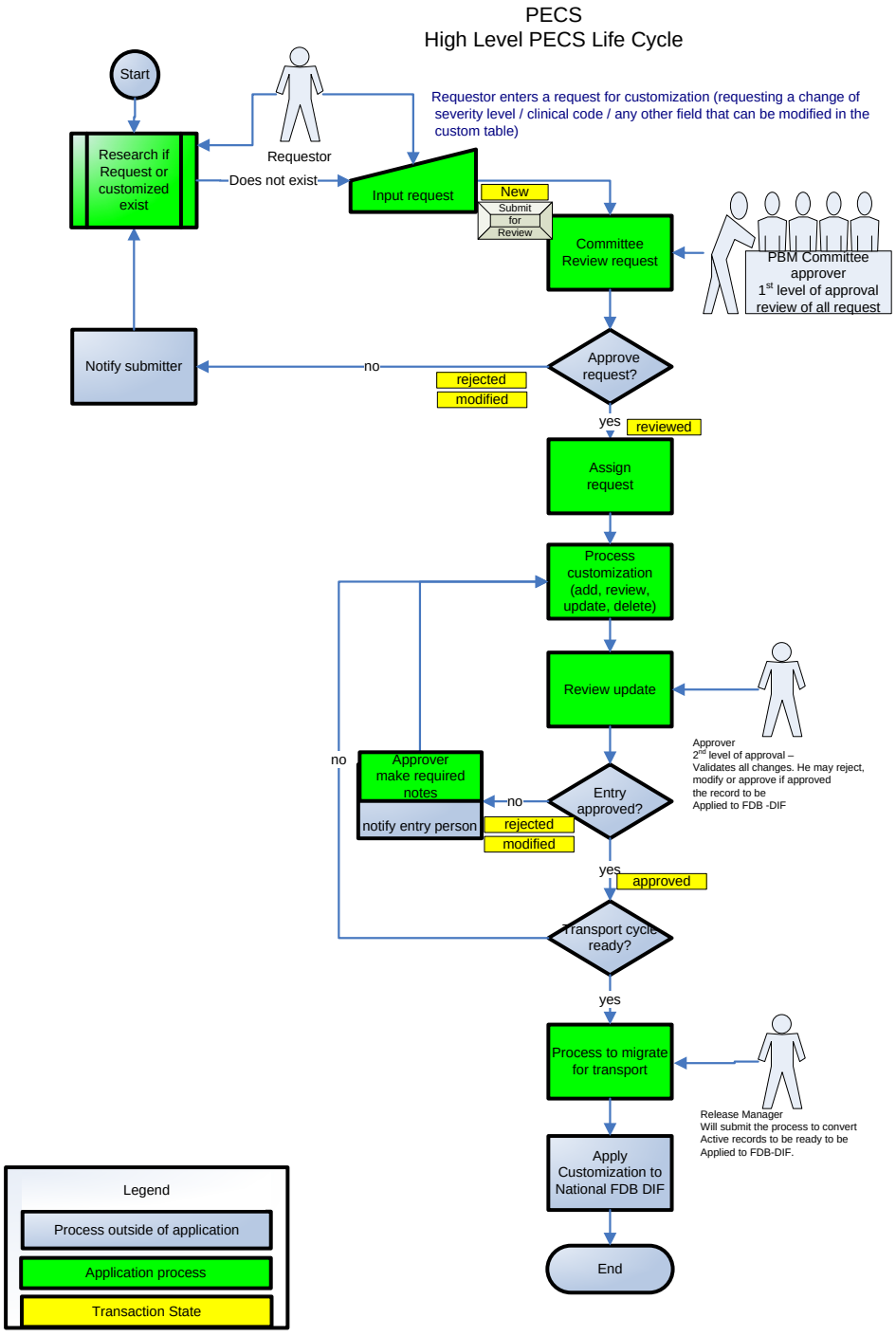


2.2 Data Flows

2.2.1 Process Flow

Figure 4 shows the life cycle of a customization change from the Requestor entry to the point the record is ready to be sent to the production FDB Drug Information Framework (DIF) custom table. The updates and changes are made and maintained in a Staging Table. Records are not extracted until the Release Manager submits approved changes. Records are then formatted and placed in a directory where they will be updated to production. The process that updates these records uses software named DATUP.

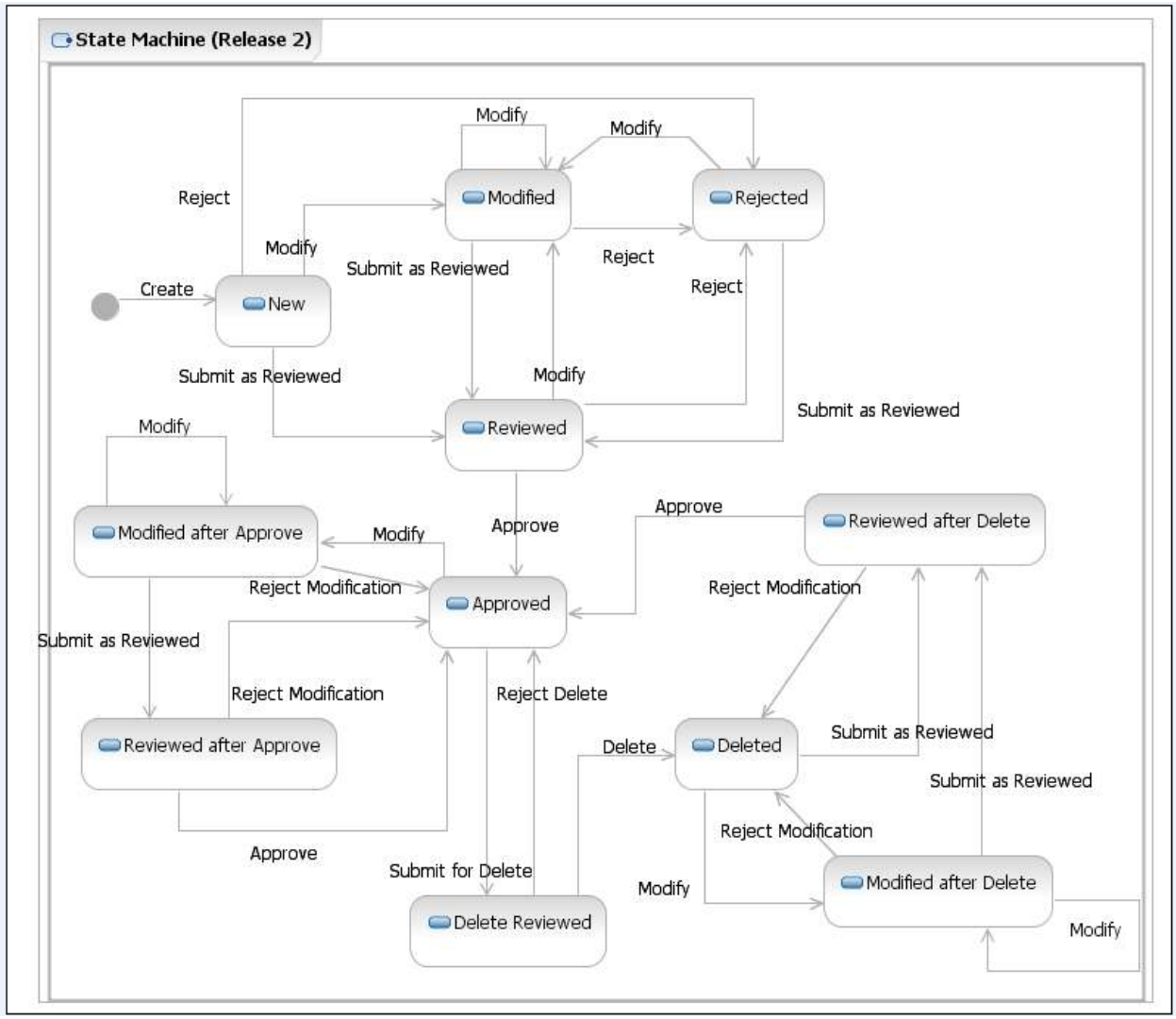
Figure 4: PECS Customization Life Cycle



2.2.2 Transaction Flow

Figure 5 depicts the Action Statuses of a record's transition from creation to approval.

Figure 5: Action Statuses



Action Statuses

This list displays the different Action Statuses a VA customized record may go through as it steps through the approval workflow within PECS. Note that only seven of the following eleven states are displayed in the user interface - in other words, some of this information is "behind-the-scenes." It is included here as information only.

New - A new customization request has been created. If a user has the appropriate authority, they may modify the request (Modified) to be completed at a later point. Then, if they have the proper authority, they may submit the request as reviewed (Reviewed).

Modified - A user can make changes to their own New requests. The record will remain Modified until a user with the proper authority (Approver role) reviews the request and submits the request as Reviewed.

> ***Modified After Approve*** - ***(displays as Modified)*** A user with the proper authority has requested a change in the Approved customization that requires another approval process.
>
> ***Modified After Delete*** - ***(displays as Modified)*** A user with the proper authority has requested the deleted record be considered again for Approval with or without modifications. This requires another approval process.

Reviewed - This is the first stage of approval. A user with the proper authority (Approver role) reviews the new or modified customization request and submits it as Reviewed. The approver may also reject or modify the request. Note that an approver can review their own requests but not approve them.

> ***Reviewed After Approve*** - ***(displays as Reviewed)*** Modifications were made to an approved record. A user with the proper authority (Approver role) reviews the request and submits it as Reviewed. The Approver may also reject the request, in which case the record returns to the Approved state, or they may modify it.
>
> ***Reviewed After Delete*** - ***(displays as Reviewed)*** Modifications were made to a deleted record. A user with the proper authority (Approver role) reviews the request and submits it as Reviewed. The Approver may also reject the request, in which case the record returns to Deleted state, or they may modify it.

Rejected - The customization request is in a Rejected state. At this point the user may make changes, resubmit, or allow the customization to remain in Rejected state. All records that are rejected or not approved will remain in that state and will be available to the user for any future changes.

Approved - This is the second stage of approval. A user with the proper authority (Approver role) who did *not* submit the request as Reviewed will review the record and may approve, reject, or modify the request.

Delete Reviewed - The record remains active but a user with the proper authority (Approver role) has requested deletion of an existing approved customization.

Deleted - A user in the Approver role who did *not* submit the request for Deletion may delete the customization. If an Approver confirms the deletion, the record will remain active for potential future modifications.

2.3 User Access Levels

The PECS application is accessible only by users signed directly into the VA network, or by users signed into the VA network via approved virtual private network (VPN) software. User authentication into the VA network is a precondition of PECS application access. Application authentication and authorization will be controlled by the VA Kernel Authentication and Authorization for J2EE (KAAJEE) security Application Programming Interface (API). Privileges are granted by PECS Administrators.

In order to log in to the application, each user must have a valid VistA account at a local or national facility, since KAAJEE delegates user authentication to VistA. At the application's login screen, users are prompted for their access and verify codes and will be allowed to select the VistA institution which issued their credentials.

2.3.1 Identity Management

Access to PECS is a two-step process. Authorization is handled through the use of specific VistA security keys which represent the user roles within PECS. These roles (Requestor, Approver, Release Manager and Administrator) have a set of permissions within PECS that allow them to perform specific tasks. A PECS user can hold multiple roles and would have access to all the functions associated with each role. These roles are mapped to security keys as follows.

Table 2: PECS VistA Security Keys

PECS Role	VistA Security Key
Requestor	PSS_CUSTOM_TABLES_REQUESTOR

PECS Role	VistA Security Key
Approver	PSS_CUSTOM_TABLES_APPROVER
Release Manager	PSS_CUSTOM_TABLES_REL_MAN
Administrator	PSS_CUSTOM_TABLES_ADMIN

The user provisioning process is part of the VistA system and is thus not documented here. Password changes, account activation/inactivation, etc., must be performed through VistA. Refer to the appropriate documentation for details on user account management.

2.3.2 Role Assignment

In addition to the VistA Security Keys, users must be assigned to roles by a PECS Administrator in User Roles. The exception is the Requestor role (the least-privileged access to PECS), which does not require specific assignment by an Administrator. See Update User Roles for additional information.

2.3.3 Role Descriptions for Identify Management

Following is a list of roles available within the application, and a description of what each role can do:

Requestor:

Creates Customization Requests.

Approver:

Creates Customization requests and Reviews and Approves Customization Requests created by other users.

Release Manager:

Generates Custom Update Files; Reviews existing Custom Updates.

Administrator:

Grants/Removes User Role privileges; Updates Concepts Settings; Edits content on the Contact us page.

(This page included for two-sided copying.)

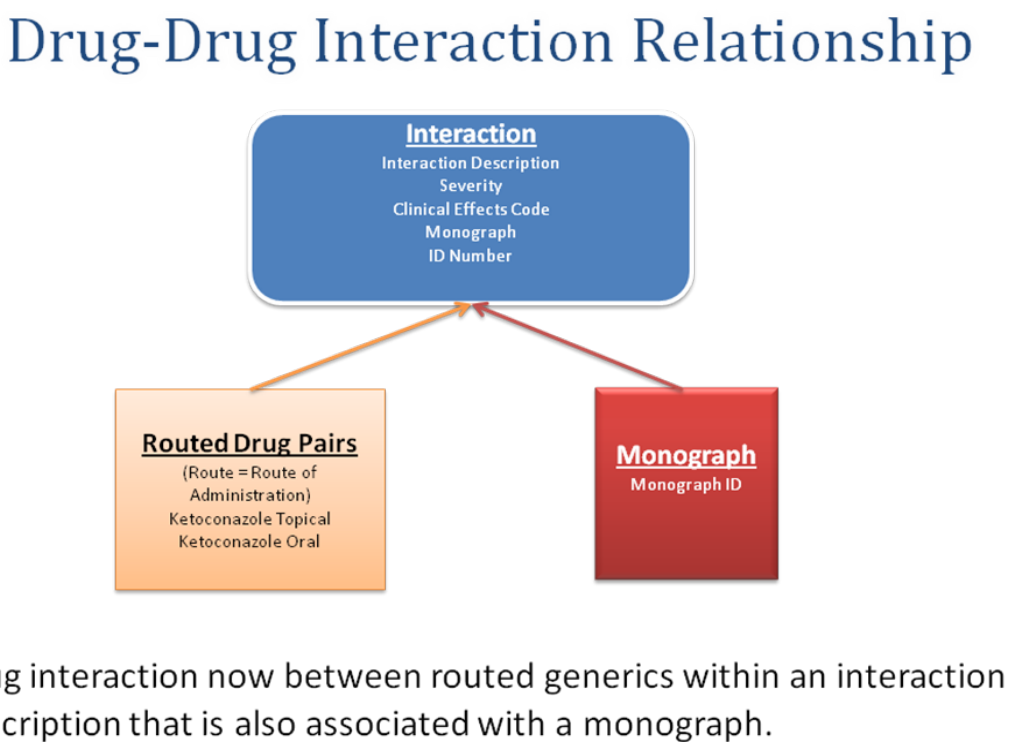
3 Customization Information

The Customization Information section describes the customizations that can be done through PECS.

3.1 Drug-Drug Interaction and Professional Monograph

Figure 6 displays how a Drug-Drug Interaction is tied to Drug Pairs and Professional Monographs: More information on Drug-Drug Interactions, Drug Pairs, and Professional Monographs is provided later in the manual.

Figure 6: Drug-Drug Interaction Relationship



FDB Drug-Drug interaction severity levels:

1 = Contraindicated
2 = Severe
3 = Moderate
9 = Undetermined severity – Alternate therapy

Within the VA system, an FDB or VA Custom drug-drug interaction of severity level 1 will return a Critical order check and severity level 2 will return a Significant order check. Severity levels 3 and 9 will not return an order check.

Types of drug-drug interaction customizations include:

- Change in severity level
- Add or remove drug pairs
- Create drug interactions not found in FDB

Note:	Due to the millions of possible drug pair combinations, you must be very specific on which two products are involved when reporting problems with the system.

3.2 Duplicate Therapy

The Duplicate Therapy concept allows you to specify the maximum number (0, 1, 2, 3, or 4) of duplicate therapy matches that can occur within a therapeutic class without creating an order check. A '0' duplicate allowance means only 1 medication from that therapeutic class can be on the patient profile without getting an order check (zero duplication). If a second drug from that class is added the provider gets the order check. If the allowance is '1', two drugs can be on the patient profile at once, the 3rd drug added would get the check (one duplication), etc.

The only type of Duplicate Therapy customization allowed is to increase or lower the duplicate therapy allowance for a therapeutic category.

3.3 Dose Range

A Dose Range is the allowable dosage of a drug based on a number of factors such as patient age, weight, and Dose Route. PECS allows you to modify the Dose Ranges included in the FDB-DIF product.

- Dosing is based on the GCN (Generic Code Number) Sequence Number (GCNSEQNO), a number specific to all drug products with the same generic ingredient(s), route of administration, drug strength(s) and dosage form.
- Dosing is age-specific for most products. FDB has dosing for neonatal, infant, adolescent, adult, and geriatric. All ages are by days, for example, 18 years x 365= 6570 days.
- FDB also has indication-specific dosing, and dosing type. Examples of dosing type are loading, maintenance, single, initial.
- A typical product may have 30 or more dosing records when all variables are taken into consideration.
- The initial implementation of dosing order checks within VistA looks at the maximum single dose and daily dose range order checks using a common indicator.

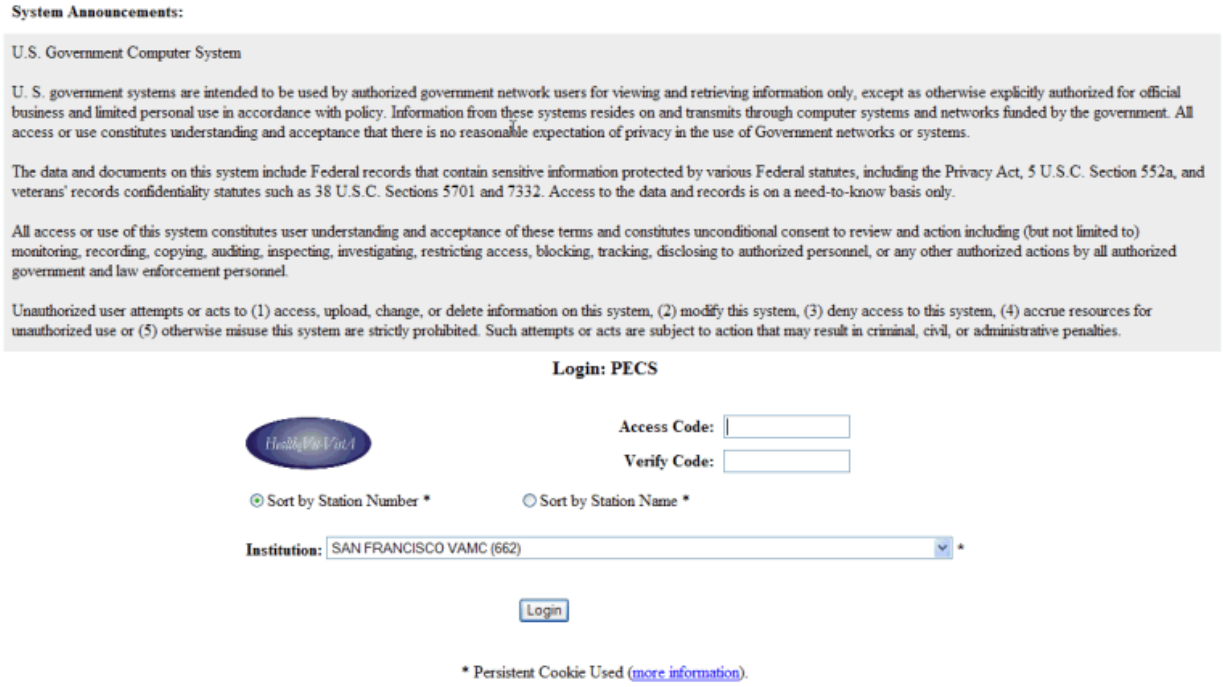
4 Getting Started

The Getting Started section provides information that is essential for a user to get started with PECS.

4.1 Login

PECS requires the user to login to prevent unauthorized users from accessing the system and to establish identity for their actions within the application. Note that authorization is handled through the use of specific VistA security keys. PECS doesn't assign individual permissions to users. Instead, it defines a number of roles for its users (Requestor, Approver, Release Manager and Administrator) and associates a set of permissions with each of them. To see the list, refer to the Identity Management section.

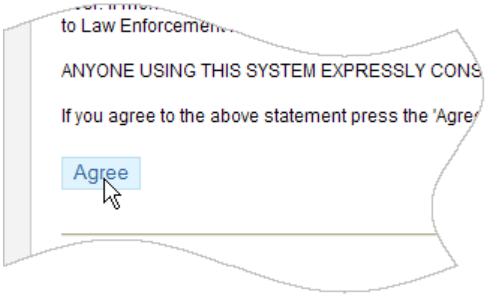
Figure 7: KAAJEE Login Screen



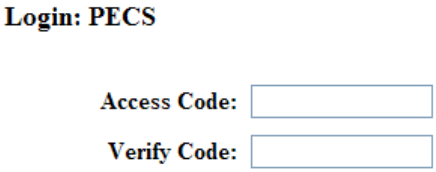
4.1.1 Logging into PECS

To login to PECS:

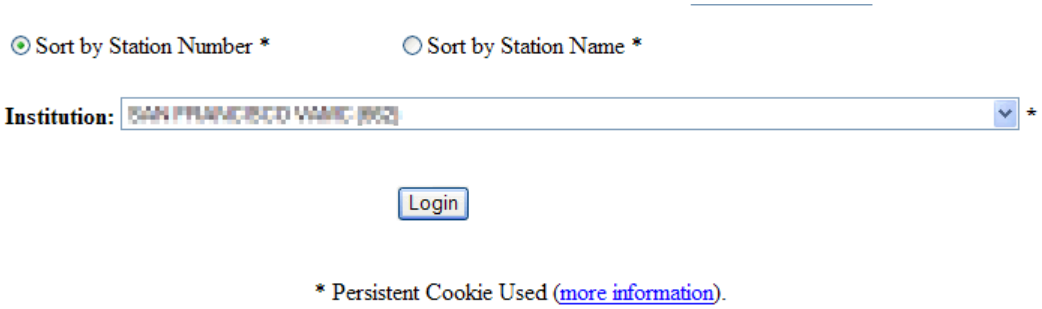
1. When started, PECS displays the Confidentiality Statement. You must agree to this statement to continue. Click Agree.



2. On the Login Screen, enter your Access Code and Verify Codes.



3. Select your Institution. This selection will be remembered the next time you login. Typing the first few letters of the name of the institution will jump to the first entry in the list with those letters.



4. Click Login.

4.1.2 Authentication Explanation

Application authentication and authorization is controlled by KAAJEE. Refer to VistA documentation for details on the user account maintenance.

If the response from the authentication request is successful via the KAAJEE API, KAAJEE returns a user profile object, which is used by the application to determine the user's role and permissions. On successful login, the system displays the PECS Home page.

4.1.3 Changing User ID and Password

All users are assigned VistA Access and Verify Codes which are their assigned/designated "User IDs" and passwords for authentication in PECS.

All account maintenance activity must be performed through VistA. Contact your ADPAC for instructions.

4.2 Application Organization

PECS is organized into a set of tabs. Only tabs that are relevant to the users role are displayed; for example, a Requestor user will see different tabs than an Approver user.

Figure 8: PECS Tab Groups Displayed

All available tabs in PECS are listed below. They will be discussed in more detail later in the User Guide.

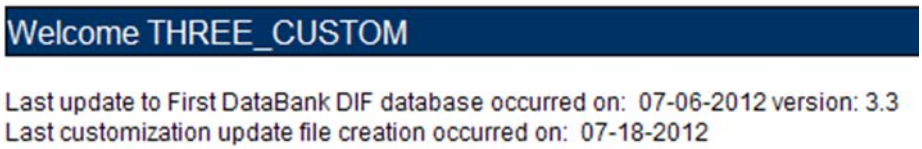
- Home
- Advanced Query / Customization
- Easy Search
- Drug Pair Lookup
- Reports
- Help
- Contact Us
- Custom Updates
- Administration

See PECS by Tab for additional information.

4.2.1 Welcome and Update Information

The Welcome and Update Information section at the top of the Home page displays the current user's account name and the dates of the last FDB-DIF Update and the last Custom Update.

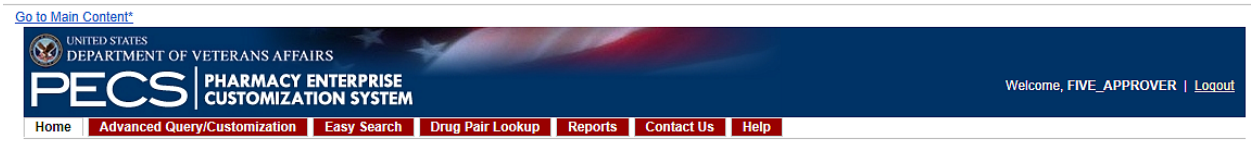
Figure 9: Welcome Text and Update Information



To Those Using Screen-Reading Assistive Technology

The window that displays the PECS tab groups also contains a link at the top, “Go to Main Content.” This link is for screen readers to jump directly to the main content of the selected tab and not read each and every tab every time a tab is selected.

Figure 10: PECS Tab Groups with “Go to Main Content” Link



4.2.2 Help and “Contact Us” Information

The Home page for all users tabs for accessing online help file and a Contact Us page.

The Help tab launches the PECS Online Help System and displays the "front page" of the Help System. To get context-sensitive help, click the Page Help link on the page you need help with. See the Help section for additional information.

The Contact Us page contains a list of PECS Project Contacts should you need additional information about the PECS product. The content of the Contact Us page is decided by users with the Administrator role. Click the link associated with the name to send that person (or group) an email. See Contact Us for additional information.

Note:	Clicking the link opens your mail application and a new email message to the person specified in the properties of the link. This may produce a warning message. This is normal.

4.2.3 General Page Structure and Navigation

All PECS application pages have certain features that provide information and help navigate the system.

Header

The PECS Header shows the Name of the current user and contains a Logout link for exiting the PECS application.

Tabs

The Tab row is used to access PECS functions.

Content

The tools (such as build a query) or content (such as a customization request) are displayed here.

Footer

The footer contains navigation links; this is a duplicate of the tabs. The application version is also displayed here.

4.2.4 Home Page

The Home Page is the first page that the user sees after logging into PECS and can be returned to at any time by clicking the Home Tab. The Home page provides summary counts of the number of active customization records accessible to the current user. Additionally, it displays the last update to the First Databank DIF database tables occurred and also when the last customization update file was created.

The Home page is organized into panels containing specific information; only panels that are appropriate to the role of the current user are displayed. Home, Help, and Contact Us are displayed for all users.

5 PECS by Tab

Tabs provide the organization for the functions provided by PECS. This section provides an overview of the tabs and their functions. The tabs themselves are explained in more detail later in the user guide.

5.1 Home

The Home tab is available to the following type of PECS users:

- Requestor
- Approver
- Release Manager
- Administrator

The PECS Home tab is the first page you see after you have successfully completed Login. The appearance of the home tab is Role-specific; what appears on the page is different depending on the Role associated with your login credentials.

See the Home Page section in Getting Started for additional information, as well as the role-specific home page sections in User Roles and Tasks.

Figure 11: Requestor Home Page

5.2 Advanced Query/Customization

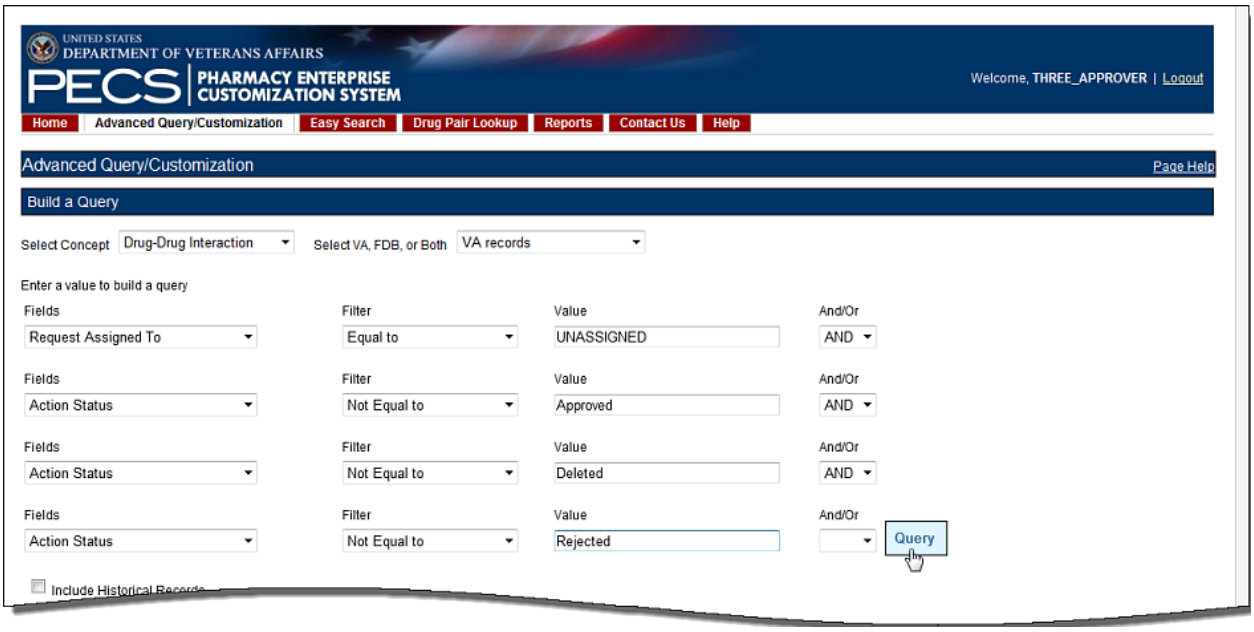
The Advanced Query/Customization tab is available to the following type of PECS users:

- Requestor
- Approver
- Release Manager
- Administrator

Searching for records is the one common task for all roles in PECS. It is done from the Advanced Query/Customization tab which is available to all users.

The Query Builder Panel on the Advanced Query/Customization page allows you to retrieve a specified set of records from the VA Custom Tables, the FDB standard tables, or both in order to perform research, make customizations, make customization changes, or export data. You can use it to create a new query, load a query you have previously saved, or load a query saved by another user.

Figure 12: Advanced Query/Customization Window with Sample Data



For detailed information on Advanced Query/Customization, see Using Advanced Query/Customization.

5.3 Easy Search

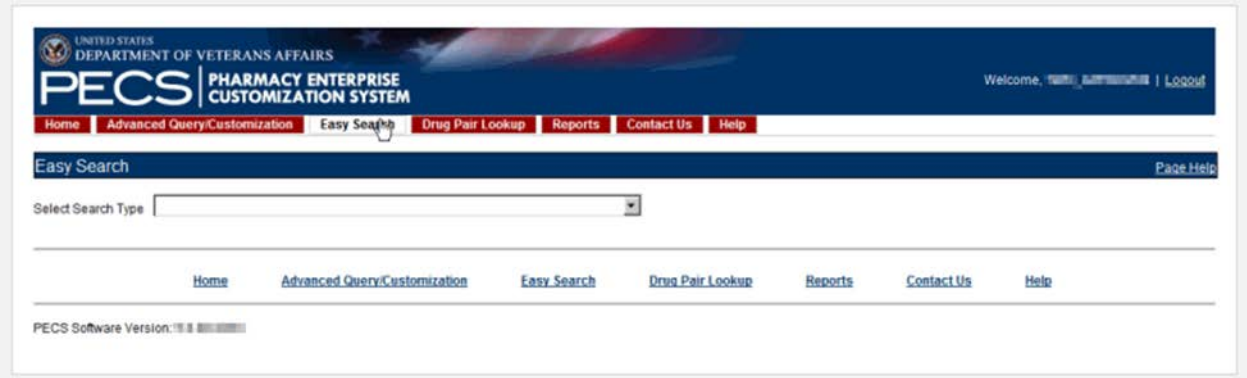
The Easy Search tab is available to the following type of PECS users:

- Requestor
- Approver

Easy Search provides a simple way to display commonly-requested PECS information. Easy Search differs from other methods for finding information in that the results are display-only; the records displayed as a result of an Easy Search query cannot be modified. However, in some cases, a link is provided to an editable version of the resulting records.

The Easy Search tab is displayed on the Home pages of the Approver and Requestor roles only.

Figure 13: Initial Easy Search Window



For additional information, see Easy Search for additional information.

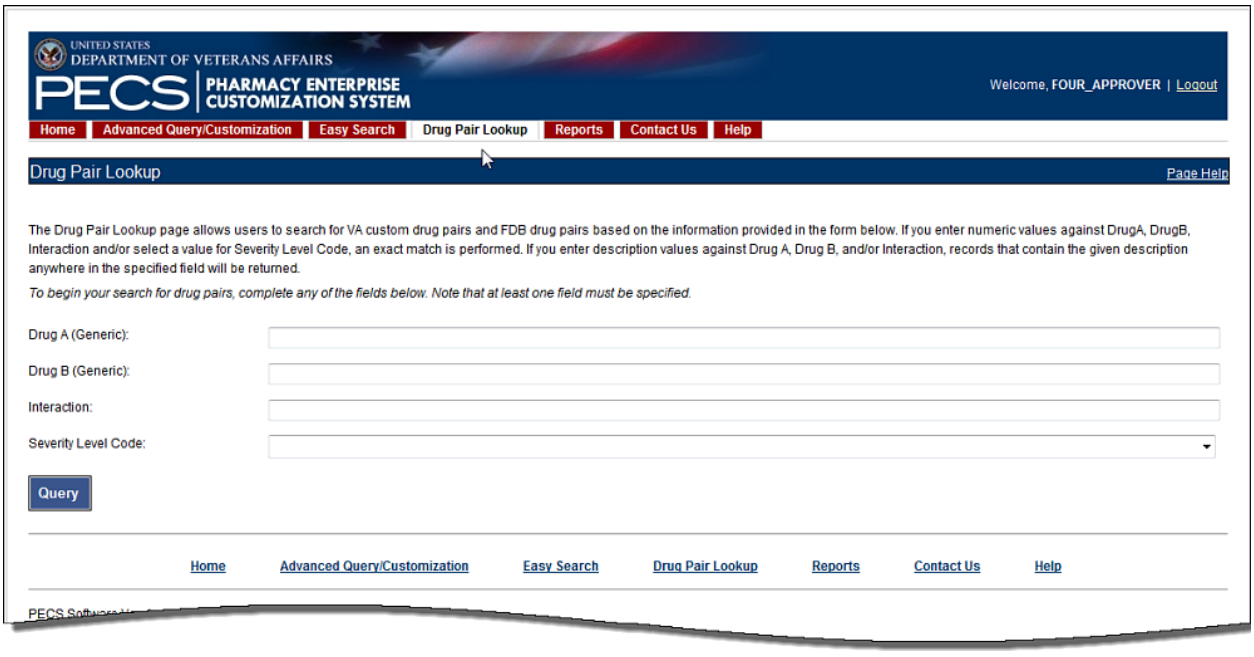
5.4 Drug Pair Lookup

The Drug Pair Lookup tab is available to the following type of PECS users:

- Requestor
- Approver

The Drug Pair Lookup tab provides the ability to perform a quick search on the most common elements of a drug pair: Generic Drug Name A, Generic Drug Name B, Interaction, and the Severity Code.

Figure 14: Drug-Drug Pair Lookup Window



For additional information, see Drug Pair Lookup.

5.5 Reports

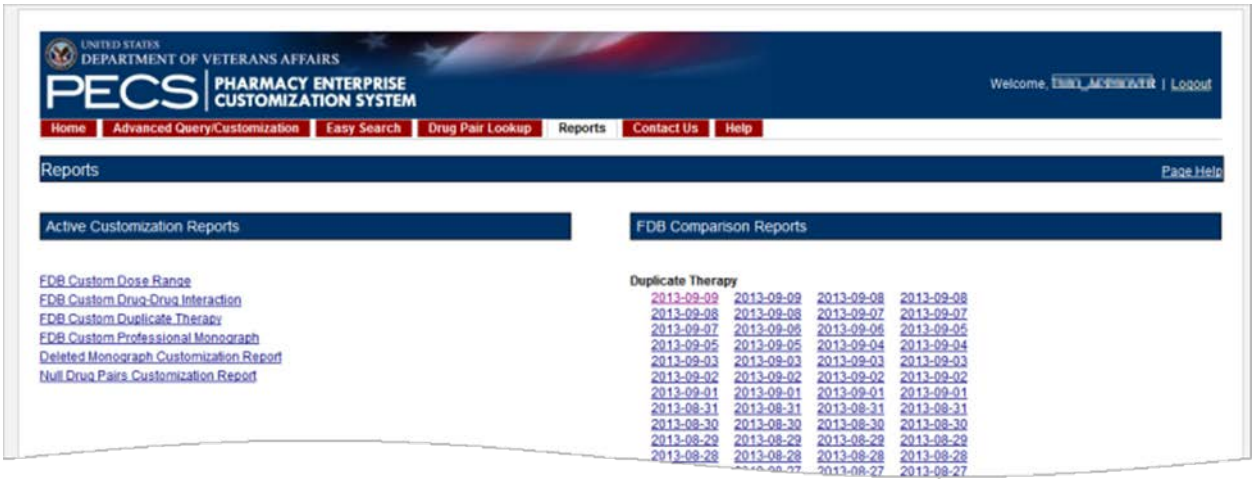
The Reports tab is available to the following type of PECS users:

- Approver
- Administrator

> **Note to Assistive Technology Users:**
> Please refer to the documentation included with your screen reader for commands related to reading column and row headers.

The Reports tab displays a list of available reports in PECS.

Figure 15: List of Reports



There are two types of Reports:

- Active Customization Reports
- FDB Comparison Reports

Reports are generated in the form of Excel spreadsheets. To run a Report, click the associated link. For additional information, see Reports.

5.6 Contact Us

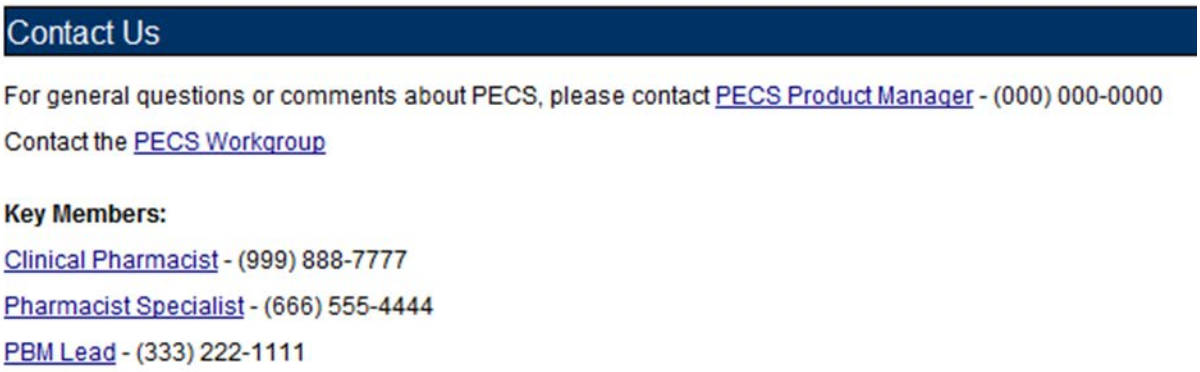
The Contact Us tab is available to the following type of PECS users:

- Requestor
- Approver
- Release Manager
- Administrator

The Contact Us page contains a list of PECS Project Contacts should you need additional information about the PECS product. The content of the Contact Us page is decided by users with the Administrator role. Contact Us may include links that allow you to send that person (or group) an email.

> **Note:** Clicking the link opens your mail application and a new email message to the person specified in the properties of the link. This may produce a warning message. This is normal.

Figure 16: Example of Contact Us Data



Note that the above example is only an example – it can be changed to display just about anything.

See Contact Us for additional information.

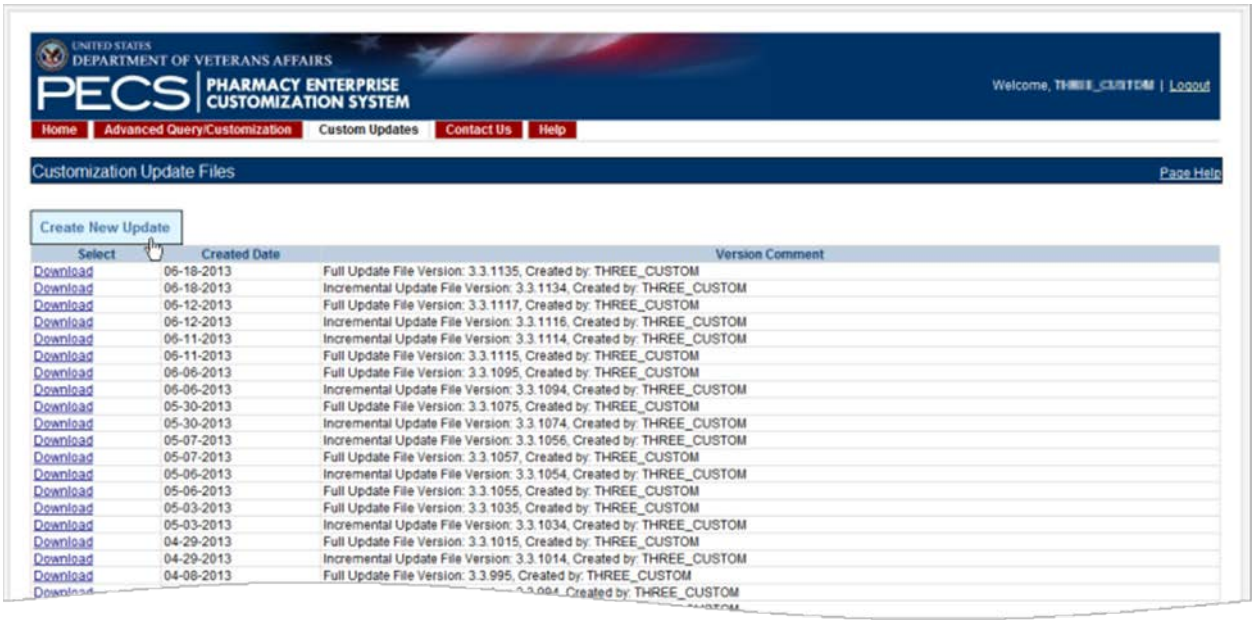
5.7 Custom Updates

The Custom Updates tab is available to the following type of PECS users:

- Release Manager

The Custom Updates tab is seen and used by a Release Manager to generate a zip file containing files for each Order Check in the FDB update file format. Both updates files are created by clicking the "Create New Update" button.

Figure 17: Custom Updates Tab for Release Manager



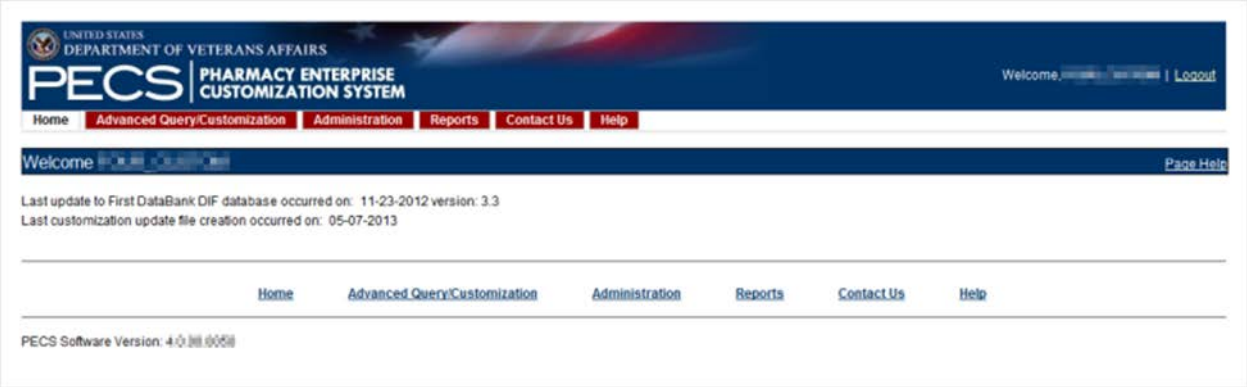
5.8 Administration

The Administration tab is available to the following type of PECS users:

- Administrator

The Administration tab is used by PECS users with Administrator privileges to perform specialized tasks such as modifying certain aspects of the PECS environment, adding or deleting Approver users, and removing Null Drug Pairs. The Administration tab is visible only to users with Administrator role privileges.

Figure 18: Administrator's Home Page



See Administrator for additional information.

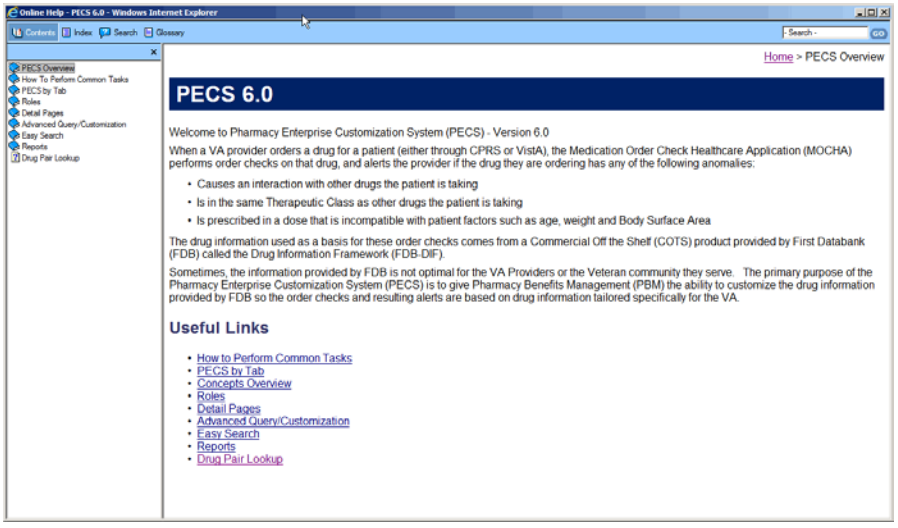
5.9 Help

The Help tab is available to the following type of PECS users:

- Requestor
- Approver
- Release Manager
- Administrator

The Help tab launches the PECS Online Help System and displays the "front page" of the Help System.

Figure 19: PECS Help Window



See Online Help for additional information.

6 Using Advanced Query/Customization

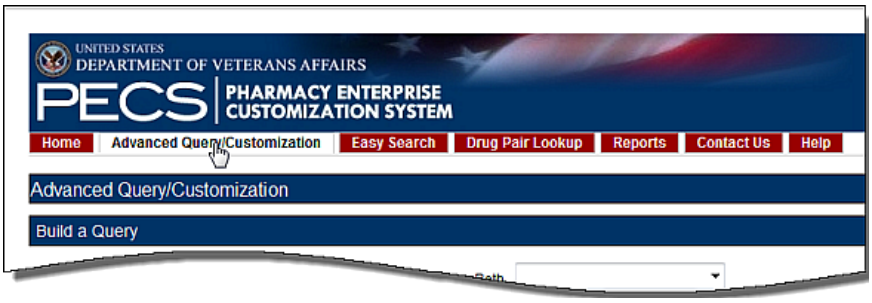
Searching for records is a task common to all PECS roles. Advanced Query/Customization is the most comprehensive way to find PECS records. Advanced Query/Customization can be used to find both VA customizations and FDB records so that they can then be customized.

6.1 Accessing the Advanced Query/Customization Page

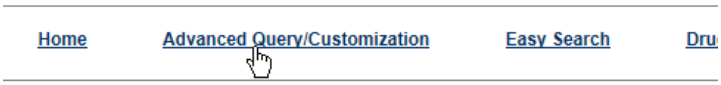
Use the Query Builder (Build a Query) Panel on the Advanced Query/Customization page to retrieve a specified set of records from either the VA Custom Tables, the FDB standard tables, or both. This allows you to perform research, make customizations, change existing customization, or export data. In the Query Builder Pane, you can create new queries or load previously-saved queries (either yours or a query saved by another user).

There are three ways to display the Advanced Query/Customization page:

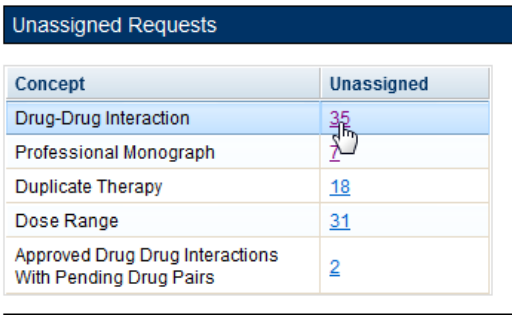
1. Click the Advanced Query/Customization tab on the navigation bar near the top of the page. This will open a blank query:



2. Click the Advanced Query/Customization link on the footer near the bottom of the page. This will open a blank query:



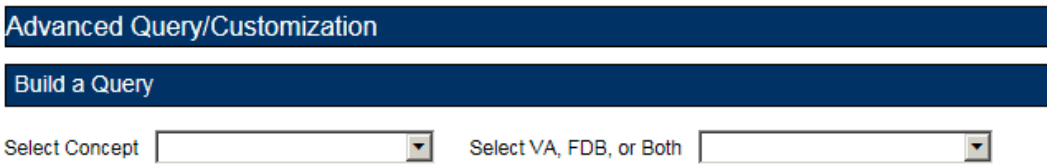
3. Click a link from one of the summary tables displayed on the Home tab. This will generate a query appropriate to the context of the link that was clicked. In the example below, a query displaying criteria to display the unassigned Drug-Drug Interaction records will be produced.



6.2 Build a Query Panel

To build a new query, you first select a Concept (type of record) and the source for the record you want to find. The concepts are Drug-Drug Interaction, Drug Pair, Professional Monograph, Duplicate Therapy, and Dose Range.

Figure 20: Advanced Query/Customization Build a Query Panel – New Query



After selecting values for the Select Concept and Select VA, FDB, or Both fields, additional fields display, through which you can create your Query.

Table 3: Build a Query Panel Fields

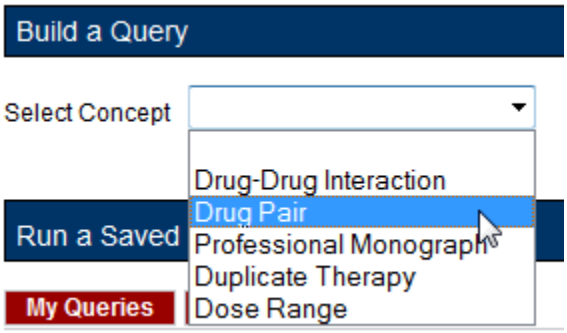
Field Name	Definition
Fields	Select the field you want to query on from the Fields list. The available fields are specific to the selected Concept.
Filter	Select a filter for the field from the Filter list (Contains, Equal To, etc.) See Query Filters for additional information.
Value	Enter search criteria in the Value field. Appropriate values are dictated by what was selected from the Fields list.
And/Or	Use the And/Or field to create complex queries by adding additional search criteria. If the query must meet multiple criteria, use AND; if a value from a list of criteria is acceptable, use OR. AND and OR can be combined when building the query. See And/Or Usage Example for additional information.
Query button	Click Query to run the query you have built or loaded
Add Default DRC Query button	Dose Range Queries Only: Adds two standard criteria (Concept Type = '6' and AGEHIGHINDAYS >= '6570) to the query. You should enter your specific criteria before clicking Add Default DRC Query.
'Include Historical Records' checkbox	Select Include Historical Records to include inactive historical records in the Query results. Historical records cannot be modified, only viewed. A Historical Record is any previous version of a record.
'Clear Query' button	Click Clear Query to delete the current query; only the Concept Type and record source will remain.

Field Name	Definition
'Query Name'	Enter a name for the current query if you want to save it. The name should be as descriptive as possible so that you (and other users) will understand what results the query will produce.
'Save Query' button	Click Save Query to save the current query for later use. If the Query Name field is blank, this button is inactive.

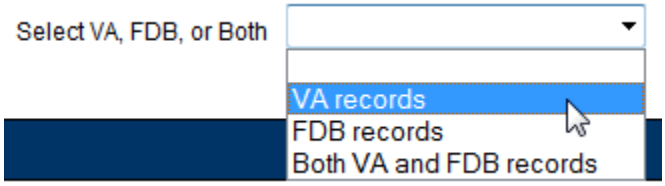
6.3 Create a Query

To create a query:

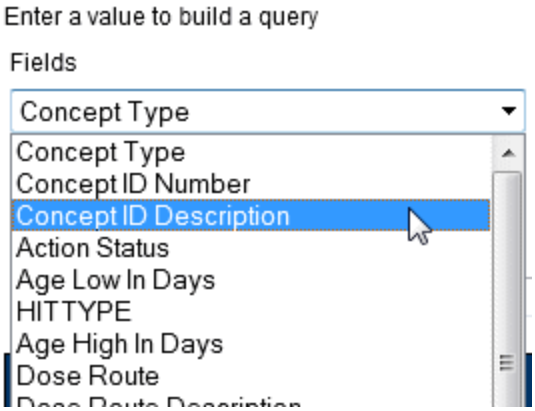
1. On the Advanced Query/Customization tab, select a Concept.



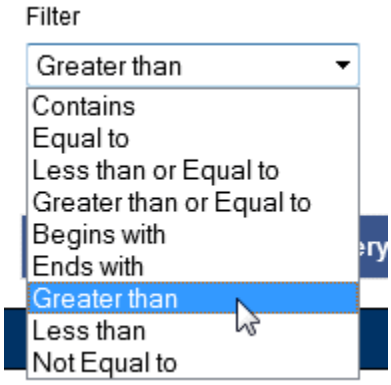
2. Select the data you want to view – VA, FDB, or Both.



3. In the "Enter a value to build a query" area, select the Field you want to use as a query criteria. The available field options will be determined by the Concept you selected earlier.



4. Select the Filter you want to impose on the Field. See Query Filters for additional information.

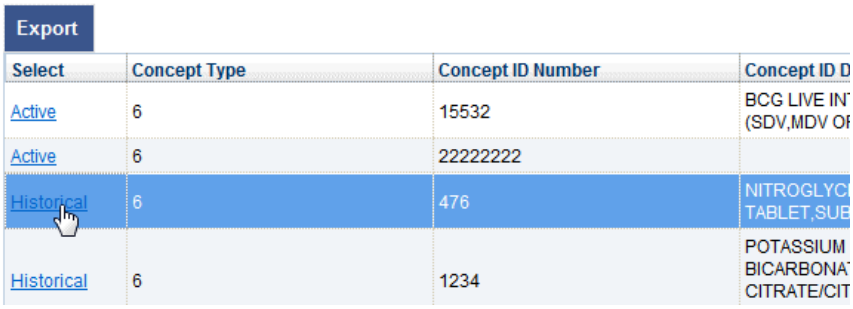


5. Enter a Value to use as your query criteria. The Value must be appropriate for the selected Field and Filter or an error message is displayed in the Results panel. See Query Specifics for additional information.

6. To add additional criteria to the query, make a selection from the And/Or list.

   - AND indicates the results must match the new criteria and all the AND-connected criteria above it
   - OR indicates that the results must match either the new criteria or the AND-connected criteria above it. See And/Or Usage Example for additional information.

7. To include Historical Records in the query, select the Include Historical Records check box.
8. When all criteria have been added, click the Query button. The results will display in the Results panel appropriate to the query being performed (VA or FDB).
9. To see details of the record, click the link in the Select column. The links are either Active (current VA record), Historical (old version of an active VA record), or Open (FDB record).



6.3.1 Query Filters

The Advanced Query/Customization query function provides Filters that allow you to control what data is returned by the query. The filters are.

Table 4: Query Filters

Filter Name	Filter Function
Contains	The contents of the Value field appears somewhere in the database row of the Field being queried. Used primarily for fields containing text data. Contains is the default Filter option. Contains = “25” would match 25, 125, and 250, but not 205.
Equal To	The contents of the Value field exactly matches the contents of the database row of the Field being queried. “Equal To” = “25” would match 25, but not 125, 250, or 205.
Less than or Equal to	The contents of the Value field is less than or equal to the contents of the database row of the Field being queried.
Greater than or Equal to	The contents of the Value field is greater than or equal to the contents of the database row of the Field being queried.
Begins with	The contents of the database row of the Field being queried starts with the contents of the Value field.
Ends with	The contents of the database row of the Field being queried ends with the contents of the Value field.
Greater than	The contents of the Value field is greater than the contents database row of the Field being queried.
Less than	The contents of the Value field is less than the contents database row of the Field being queried.
Not equal to	The contents of the Value field does not exactly match the contents of the database row of the Field being queried.

6.3.2 And/Or Usage Examples

To see approved records with an interaction description equal to "anti" or "Lido", build the query as follows:

Table 5: And/Or Example 1

Field	Filter	Value	And/Or
Interaction description	Equals	anti	And
Status	Equals	approved	Or
Interaction description	Equals	Lido	And
Status	Equals	approved	

If you build the query below, you will get approved records with an interaction description = "anti", but you will get all records with an interaction description of "Lido", regardless of status.

Table 6: And/Or Example 2

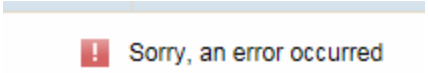
Field	Filter	Value	And/Or
Interaction description	Equals	anti	And
Status	Equals	approved	Or
Interaction description	Equals	Lido	

6.3.3 Query Specifics

- Use the YYYY-MM-DD date format for searching date fields within a query
- Date values can only use the following filters
    - Equal to
    - Less than or Equal to
    - Greater than or Equal to
    - Greater than
    - Less than

If a value that is not appropriate for the selected Field and Filter, an error message is displayed in the Results panel.

Figure 21: Bad Query Value Error Message



6.3.4 Add Default DRC Query

Queries on the Dose Range Concept (DRC) provide a special button that automatically adds predefined query criteria relevant to Dose Range records. These criteria can be used alone or in conjunction with other criteria you provide.

The predefined fields added when using the Add Default DRC Query button are:

- Concept type = 6

  AND

- AGEHIGHINDAYS >= (greater than or equal to) 6570 (18 years old)

To add these criteria to your query, click the Add Default DRC Query button.

Figure 22: Default Dose Range Query Window, with Default Dose Range Query

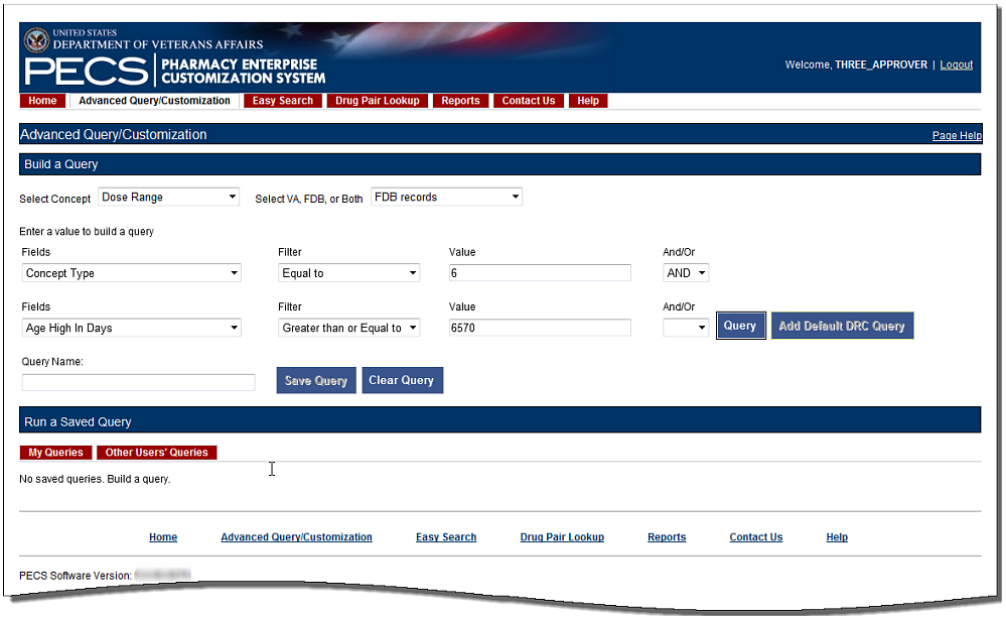
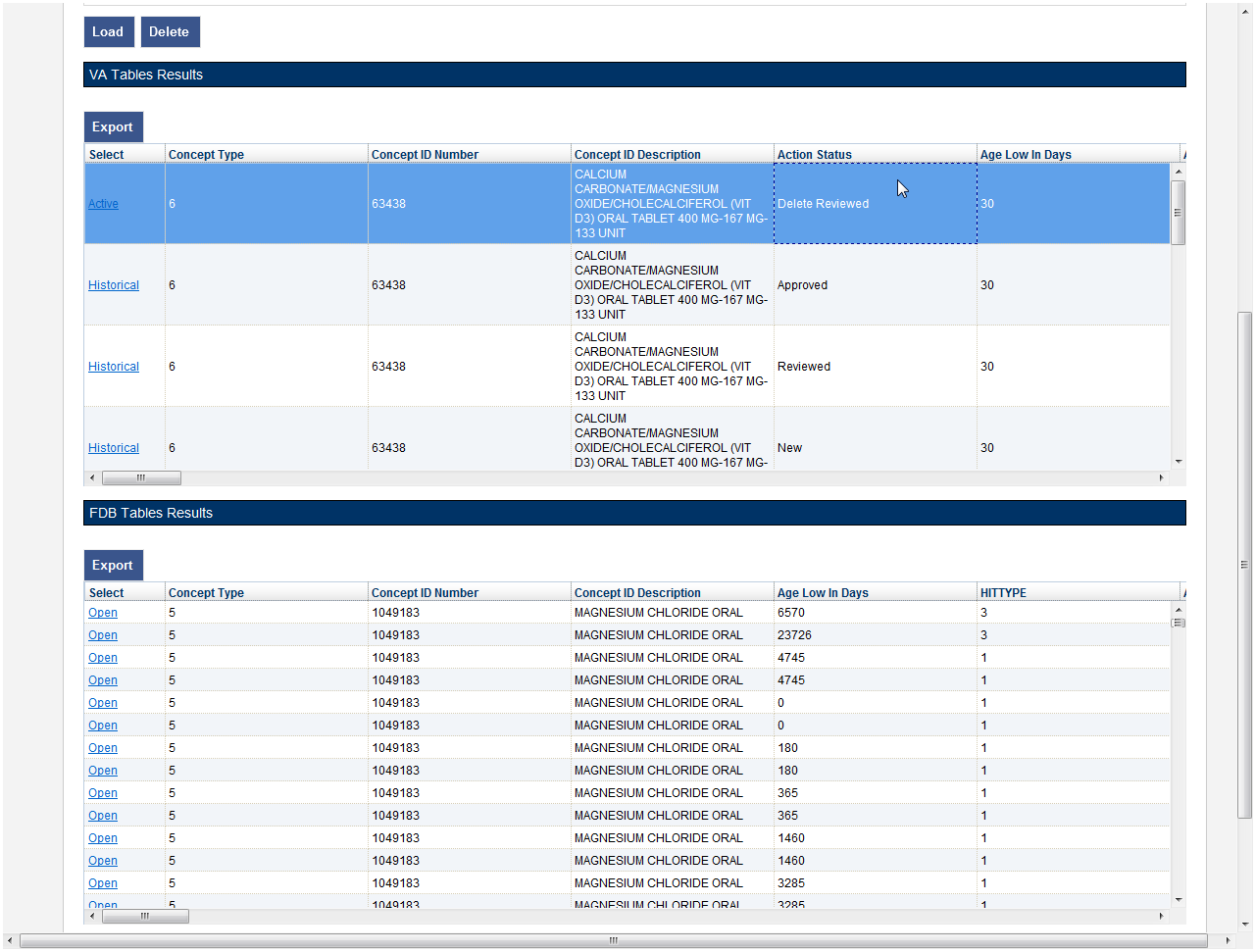


Figure 23: Results from Building a Dose Range Query with Default DRC Query



6.4 Save a Query

PECS allows you to save a complete query so that you and other PECS users can run a specific query without having to re-build it every time.

> **Note:** The state of the Historical Records check box will not be saved with the query; if desired, it must be re-selected after the query is loaded at run-time.

To save a query:

1. Create and run a query in the Build a Query panel. See Build a Query Panel for additional information.

Enter a name for the query in the Query Name field. The name must contain at least five characters and cannot be longer than 64 characters.

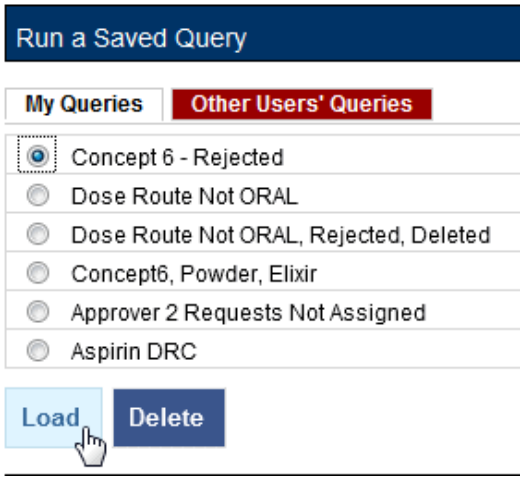
Click Save Query.

6.5 Run a Saved Query

PECS allows you to run a previously saved query with the same Concept and content (VA, FDB, or Both). There are two types of saved queries: My Queries (those that you have saved) or Other Users' Queries (queries saved by other PECS users).

To run a saved query:

1. On the Advanced Query/Customization tab, select a Concept.
2. Select what data you want to view-- VA, FDB, or Both.
3. In the Run a Saved Query sub-panel, select either My Queries or Other Users' Queries, then select the query you want to run.
4. Click the Load button. This will add the components of the saved query to the Build a Query panel.



5. Click the Query button to run the query. You may also select additional criteria to alter or enhance the saved query.

6.6 Rename a Saved Query

A saved query can be renamed by loading it then adding a different name in the Query Name field.

To rename a saved query:

1. On the Advanced Query/Customization tab, select a Concept.
2. Select what data you want to view-- VA, FDB, or Both.
3. In the Run a Saved Query sub-panel, select My Queries; you cannot rename a saved query created by another user.
4. Enter a new the Query Name field.
5. Click Save Query. The new query name will appear in the My Queries list in place of the original query.

6.7 Delete a Saved Query

You can delete queries you have created and saved. Note that the delete operation is immediate; you will not be warned that the query is about to be deleted and there is no undo option.

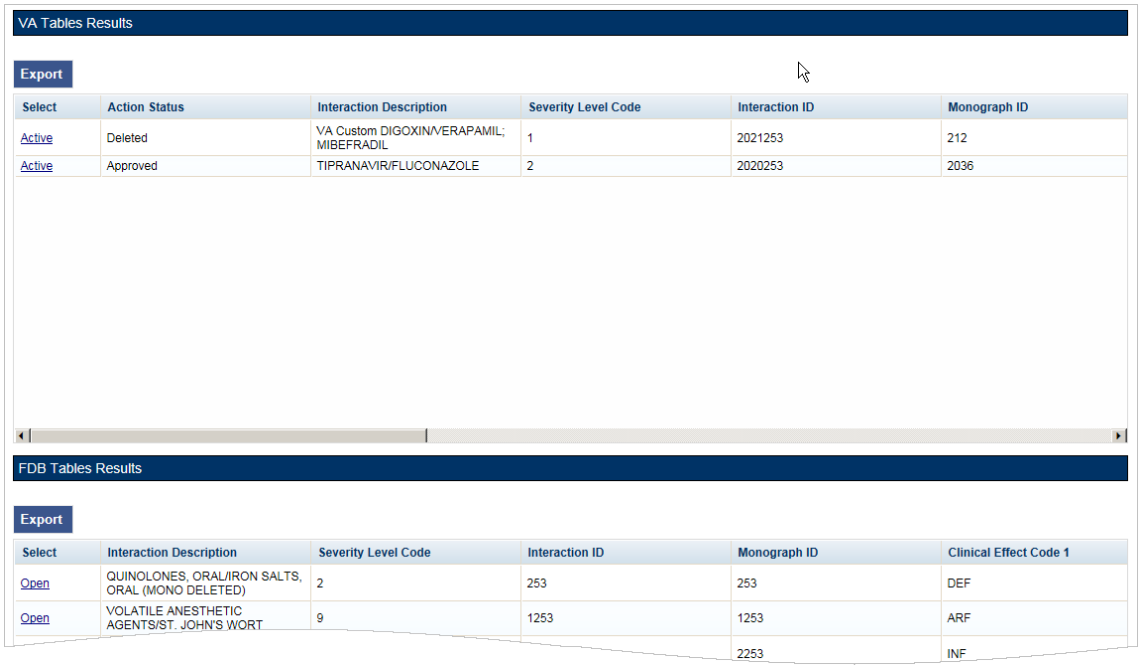
To delete a Saved Query:

1. On the Advanced Query/Customization tab, select a Concept.
2. Select what data you want to view-- VA, FDB, or Both.
3. In the Run a Saved Query sub-panel, select My Queries; you cannot delete a query that was created by another user, then select the query you want to delete.
4. Click the Delete button. The query is deleted.

6.8 Query Results

The results of the query will appear in either one or two panels: VA Table Results or FDB Table Results, depending on the type of records being queried. The results can be re-ordered, sorted by specific criteria, and exported.

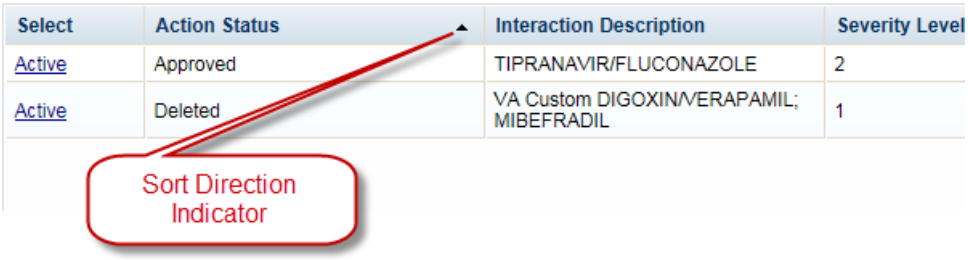
Figure 24: Example Query Results



6.8.1 Sort Query Results

You can change the sort order of results of your query by clicking on the column headings in the display grid. Clicking once will display the records in ascending order (A to Z, 1-2-3 etc.) based on the contents of the column of the header you clicked; clicking a second time display the records in descending order (Z to A, 3-2-1, etc.). A small arrow indicates the direction of the current sort and the primary sort field.

Figure 25: Sort Direction Indicator



For VA records, the default sort order is by 'Action Date', from newest to oldest. This puts the VA Customizations that have been updated most recently at the top of the returned list. By default, FDB records are displayed in the order they appeared in the update file sent by FDB. However, they can be re-sorted by clicking a column header.

Note:	Due to technical database restrictions, not all fields can be used to determine the sort order. For example, Concept ID Description on a Dose Range query cannot be used to sort the query results. Clicking these columns will have no result and the current sort order will be retained

6.8.2 Re-Order Results Columns

You can also move the columns in these tables and compare different fields side-by-side. Click the heading and drag and drop it:

Figure 26: Dragging a Column to a New Position

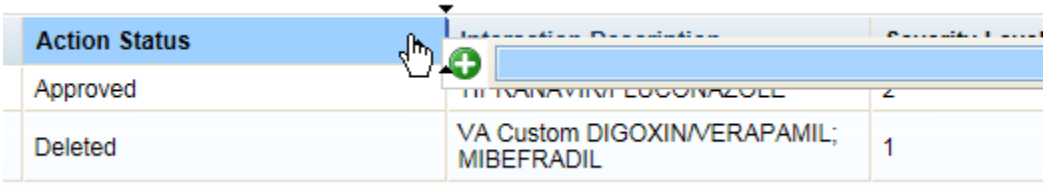
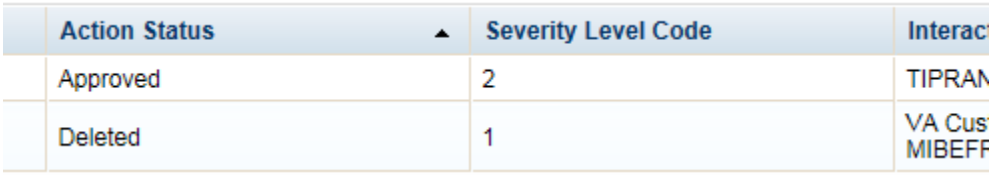


Figure 27: Re-positioned "Severity Level Code" Column

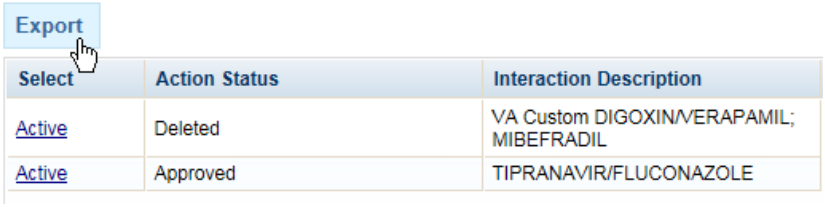


6.9 Export Query Results

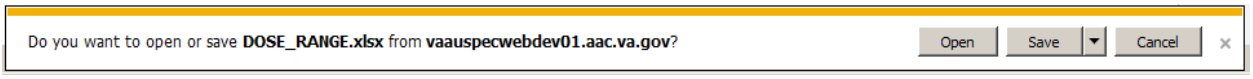
You can export query results for both VA and FDB records to an Excel spreadsheet.

To export the query results:

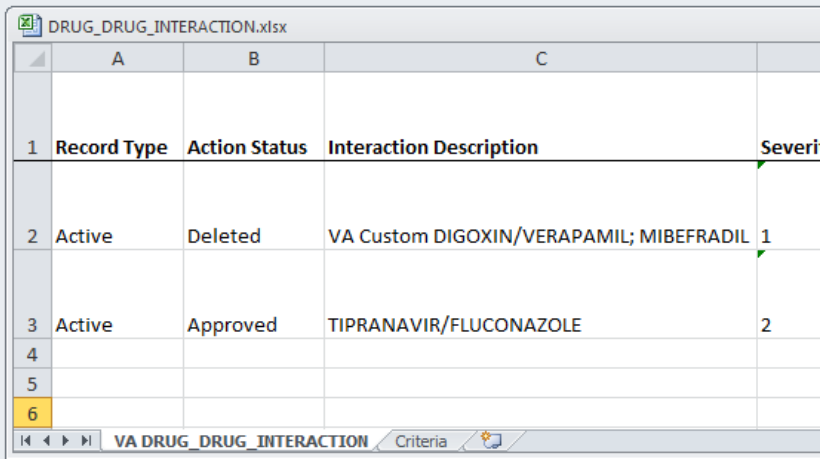
1. On the appropriate query results panel, click the Export button.



2. Select one of the following options from the dialog box:
    a) Open
    b) Save
    c) Cancel
3. Click Open to display the exported data in the spreadsheet; click Save to save a copy of the report to your system, or Cancel to abandon the export operation.



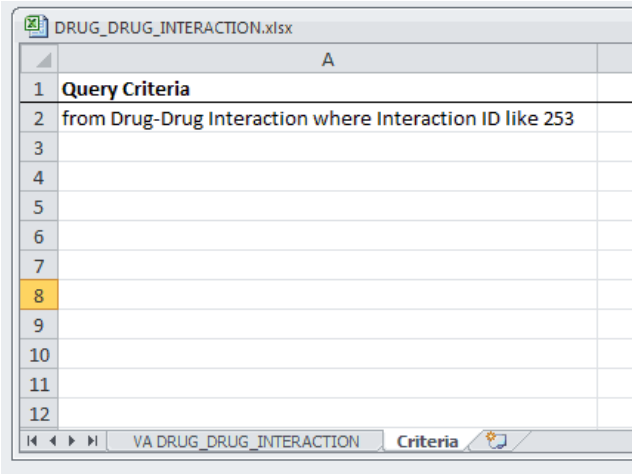
4. The spreadsheet contains two tabs:
    a) The [Name of Concept] tab (either VA or FDB) displays the results of the query.


DRUG_DRUG_INTERACTION.xlsx

	A	B	C	
1	**Record Type**	**Action Status**	**Interaction Description**	**Severi**
2	Active	Deleted	VA Custom DIGOXIN/VERAPAMIL; MIBEFRADIL	1
3	Active	Approved	TIPRANAVIR/FLUCONAZOLE	2
4				
5				
6				

VA DRUG_DRUG_INTERACTION | Criteria

b) The Criteria tab displays the criteria used in the query.

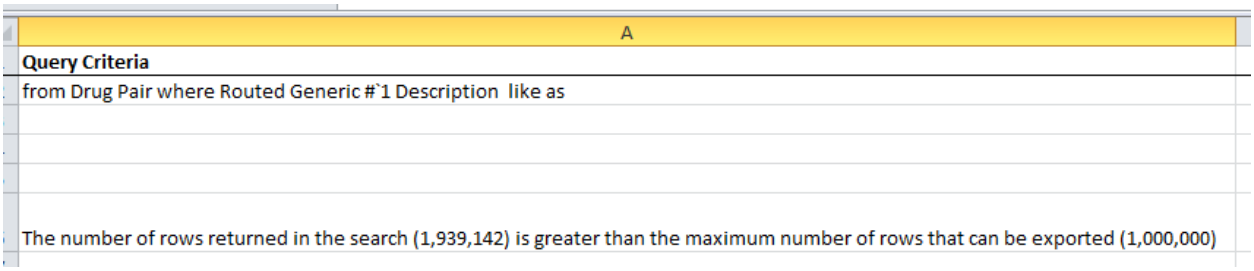

DRUG_DRUG_INTERACTION.xlsx

	A
1	**Query Criteria**
2	from Drug-Drug Interaction where Interaction ID like 253
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

VA DRUG_DRUG_INTERACTION | **Criteria**

For Drug-Drug Interaction, Drug Pair, Professional Monograph, and Duplicate Therapy records, there is a 1,000,000 line limit for exporting to the spreadsheet; for Dose Range records, the limit is 100,000. If your query returned more than the allowable number of records and you submitted the records for export anyway, the Criteria tab on the report gives you the following message: “The number of rows returned in the search (XXXXXX) is greater than the maximum number of rows that can be exported (YYYYYY).”

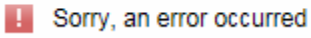
Figure 28: Export Query Line Limit Message



6.10 Query Errors

After running your query, and error message may appear in the Results panel. This is usually caused by one of the following:

Figure 29: Generic Query Error



Database Timeout (Too Many Results)

The database may timeout if the query produces too many results. If you’re getting this error frequently, try re-writing your queries to be more specific or add additional criteria that will limit the results when possible.

Inappropriate Value

Entering a value that is not appropriate for the selected Field and Filter will also produce an error message in the Results panel. For example Export Date > “Z” produces an error because “Z” is not a date value.

(This page included for two-sided copying.)

7 Working with Customization Requests

As suggested by the name of the application (Pharmacy Enterprise *Customization* System), customizations are the primary focus of PECS. The process of creating a customization may involve many steps, but the process is relatively simple. In its simplest, "happy path" form, the workflow consists of three steps:

1. Customization is Requested
2. Request is Reviewed
3. Request is Approved

7.1 Create a Customization Request

The process for creating a customization request varies with the concept type you are customizing. Customization requests can be made by either Requestor or Approver users.

7.1.1 Customize a Drug-Drug Interaction Record

Customizing a Drug-Drug Interaction record is more complicated than other record types in that you must also select and customize Drug Pairs associated with the record.

To customize a Drug-Drug Interaction record:

1. Find the Drug-Drug Interaction record you want to customize in the FDB database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information.
2. Click the Open link next to the record you want to customize.
3. Click the Edit button.
4. Make changes to the record. At minimum, you must add text in the Current Action Reason field.
5. Click Customize. The system will inform you that the customization request has been entered and will be reviewed and that the Drug Pairs have not been approved or that no Drug Pairs have been associated.
6. Click the Drug Pairs button.
7. Associate one or more drug pairs with the customized Drug-Drug Interaction. See Drug Pair Customization (Non 508-Compliant) Detail for additional information.
8. All the components are now in place for the Drug-Drug Interaction record for review and approval.

7.1.2 Customize Other Record Types

Customizing Professional Monograph, Duplicate Therapy, and Dose Range records is relatively straight-forward; there are no associated records (as in Drug-Drug Interactions) that must be modified or selected.

To customize a Professional Monograph, Duplicate Therapy, or Dose Range record:

1. Find the record you want to customize in the FDB database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information.
2. Click the Open link next to the record you want to customize.

3. Click the Edit button.
4. Make changes to the record. At minimum, you must add text in the Current Action Reason field.
5. Click Customize. The system will inform you that the customization request has been entered and will be reviewed.

7.1.3 Create Customization from a Blank Form

You can create a new record using the Open Blank Form button. This method can be used to create new Drug-Drug Interaction, Professional Monograph, and Dose Range records. It cannot be used to create a Duplicate Therapy record.

To Create a New Record:

1. Perform an Advanced Query/Customization Query for the record type (Concept) on both VA and FDB Records you want to create.
2. Click the Open Blank Form button at the bottom of the page.
3. Complete the form with as much information as possible. Fields marked as Required must be completed before the record can be saved. Some record types (concepts) have other requirements that must be met before the record can be created. See New Record Requirements by Concept Type for additional information.

New Record Requirements by Concept Type

Some records have specific requirements for new records that are not indicated by the Required label.

Drug-Drug Interaction

- For a completely new record, the interacting drugs must be separated by a forward slash (/) character.

Professional Monograph

- Custom Professional Monographs can be associated with Drug-Drug Interactions once they are Approved.

Dose Range

- Concept Type can only be 6.
- The Concept ID Number must correspond to an existing FDB record for Concept Type 6.

Duplicate Therapy

- New Duplicate Therapy records *cannot* be created using this method. A new Duplicate Therapy customization must be made on the Advanced Query/Customization page.

Drug Pairs

- New Drug Pair records *cannot* be created using this method. A new Drug Pair can be added by selecting routed generic drugs associated with a drug-drug interaction.

7.2 Modify Customization Requests

Customization requests can be modified at any time. If a required field is changed (other than Current Action Reason), the customization Action Status will change to Modified; non-required fields do not

affect Action Status. Requestors can modify customizations they have requested, but cannot modify customizations requested by other users. Approvers can modify any record at any time. Release Managers and Administrator cannot modify customization requests.

Note	Although the Edit button will appear on customization requests for Release Managers and Administrators (and for Requestors viewing requests other than their own), there is no way to save any changes made.

To modify a customization request:

Find the record you want to modify in the VA database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information. You can also use the links on your Home page to locate records for processing. See Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

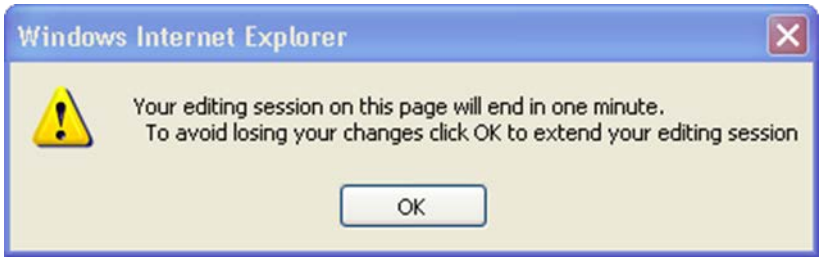
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

1. User Roles and Tasks and the Home page section related to your PECS role for additional information.
2. Click the Active link next to the record you want to modify.
3. Click the Edit button.
4. Make changes to the record. At minimum, you must add text in the Current Action Reason field.
5. Click Modify to save your changes. Click Cancel Edit to abandon your changes and return to the detail page.

7.3 Review Customization Requests

Review is the second step to getting a customization Approved. A Review must be performed by an Approver. Approvers cannot Review customization requests they have created and cannot Approve customization requests they have Reviewed.

To Review a customization request:

Find the record you want to Review in the VA database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information. You can also use the links on your Home page to locate records for processing. See Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

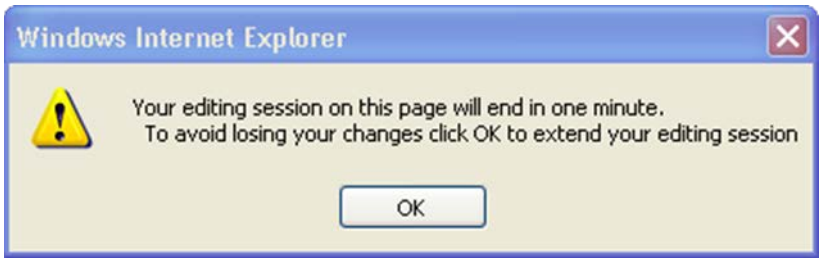
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

1. User Roles and Tasks and the Home page section related to your PECS role for additional information.
2. Click the Active link next to the record you want to Review.
3. Click the Edit button.
4. Review the customization request to be certain it meets your approval.
5. Click Submit as Reviewed to save your changes. Click Cancel Edit to abandon your review and return to the detail page.

7.4 Approve Customization Requests

An Approved customization request is considered valid and should be used in making decisions in veteran pharmaceutical care. Approved customization requests are included in the Custom Updates that are distributed to other pharmacy applications, and are used in Order Checks for veteran prescriptions.

Customization requests are Approved by Approvers. Approvers cannot Approve customization requests they Reviewed; they can Approve customization requests they created once they have been Reviewed by another Approver.

To Approve a customization request:

Find the record you want to Review in the VA database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information. You can also use the links on your Home page to locate records for processing. See Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

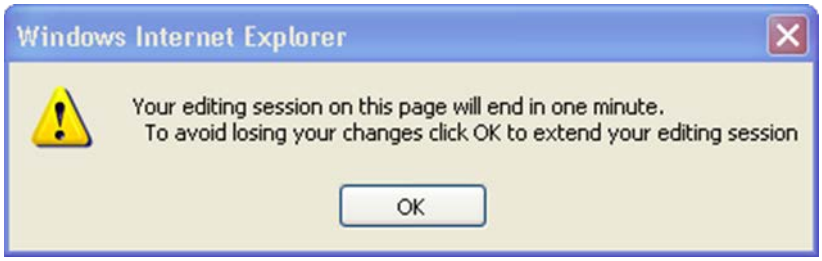
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

1. User Roles and Tasks and the Home page section related to your PECS role for additional information.
2. Click the Active link next to the record you want to Approve.
3. Click the Edit button.
4. Review the record to be certain it meets your approval.
5. Click Approve to save your changes. Click Cancel Edit to abandon your changes and return to the detail page.

7.5 Reject Customization Requests

Customization requests can be Rejected at all points of the Create/Review/Approve process. Customization requests are Rejected because they are thought to be invalid as written by either the Reviewer or Approver. Customization requests can also be Rejected by the user who initiated the customization request if they determine that request is no longer needed. Rejected customization requests can be modified and re-submitted for Review and Approval.

To Reject a customization request:

Find the record you want to Review in the VA database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information. You can also use the links on your Home page to locate records for processing. See Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have

precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

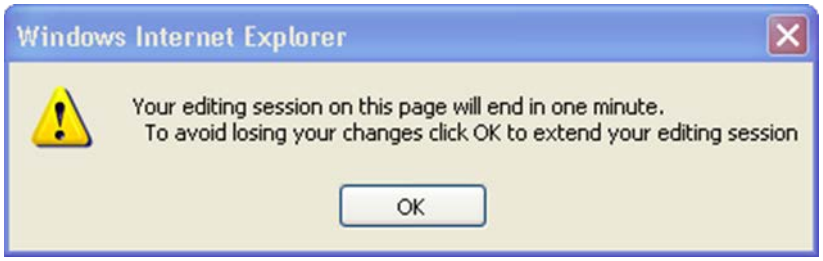
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

1. User Roles and Tasks and the Home page section related to your PECS role for additional information.
2. Click the Active link next to the record you want to Reject.
3. Click the Edit button.
4. Review the customization request to be certain it is invalid and cannot continue in the Review/Approval process without modification.
5. Click Reject to save your changes. Click Cancel Edit to abandon the Reject process and return to the detail page.

7.6 Delete Customization Requests

If an Approved customization is no longer valid, and should not be used in Order Check decisions, it must be deleted. Deleting a customization request will not remove it from the PECS system, but will remove it from MOCHA during the next Custom Update. Deleted records can be edited and re-submitted for Review and Approval.

Deleting an Approved customization request is a two-step process. One user with Approver privileges must request that the record be deleted, and then a second user with Approver privileges must delete the record. At any time during this process, prior to actual deletion, the deletion request can be Rejected.

To Delete a Customization Request:

Find the record you want to Review in the VA database using Advanced Query/Customization. See Using Advanced Query/Customization for additional information. You can also use the links on your Home page to locate records for processing. See Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

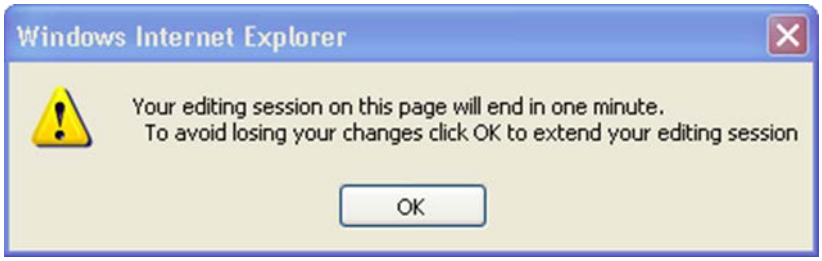
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

1. User Roles and Tasks and the Home page section related to your PECS role for additional information.
2. Click the Active link associated with the request you want to Delete.
3. Click the Edit button.
4. Review the content. If you are satisfied that the request should be deleted, write a brief explanation in the Current Action Reason field.
5. Click the Submit for Delete button.
6. A confirmation pop-up will appear. Click OK to continue the deletion process; this will change the Action Status to Delete Reviewed. Click Cancel to return to Edit mode.

Now another Approver can confirm the Delete Reviewed customization request for deletion, and complete the process.

To confirm a Delete Reviewed customization request for deletion:

1. Find the record you want to delete using Advanced Query/Customization or from your PECS Home page (in My Requests for Deletion).
2. Click the active link associated with the request you want to Delete.
3. Click Edit.
4. Enter a comment for agreeing with the Request for Deletion.
5. Click Delete.
6. A confirmation pop-up will appear. Click OK to complete the deletion process; this will change the Action Status to Deleted. Click Cancel to return to Edit mode.

7.7 Record Locking Feature

Records from all five concept types (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Dose Range, and Duplicate Therapy) can be edited only by a single user at a time. If more than one user attempts to edit the same record at the same time, the user who entered the record first will have precedence and the subsequent users will receive a message that the record is in-use and cannot be edited at the current time.

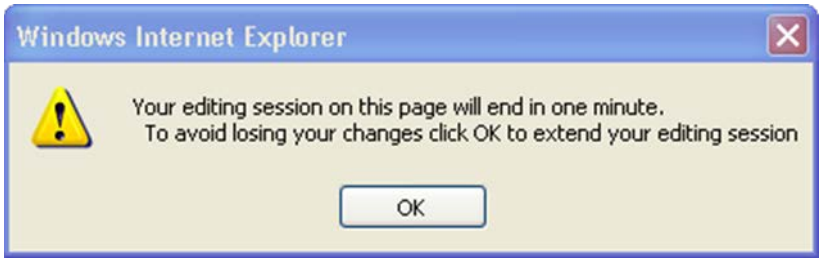
Figure 30: Record in Use

If you have opened a record that has been modified by another user while you are looking at it, PECS will warn you that the data is stale. Click OK to load the modified record.

Figure 31: Record Recently Modified

To prevent the record from being locked for too long a time, the lock will be automatically removed if no edits are done in two consecutive minutes. Click OK to continue editing the record.

Figure 32: Editing Time-Out Warning



If you navigate away from an un-saved record, a warning dialog box will appear. Click Cancel to continue editing the page; click OK to return to the read-only display.

Figure 33: Re-navigation Causing Loss of Changes Warning

8 User Roles and Tasks

PECS users have one of four roles within the application, each with specific tasks they perform.

- Requestor
- Approver
- Release Manager
- Administrator

8.1 Requestor

The primary task of a PECS Requestor is to create customization requests. The Requestor has limited privileges; while they can only view all customization requests, they can only modify the customization requests they created themselves. The Requestor Home Page reflects this limited privilege and only 1-click access to the Requestor's own customizations (My Request History).

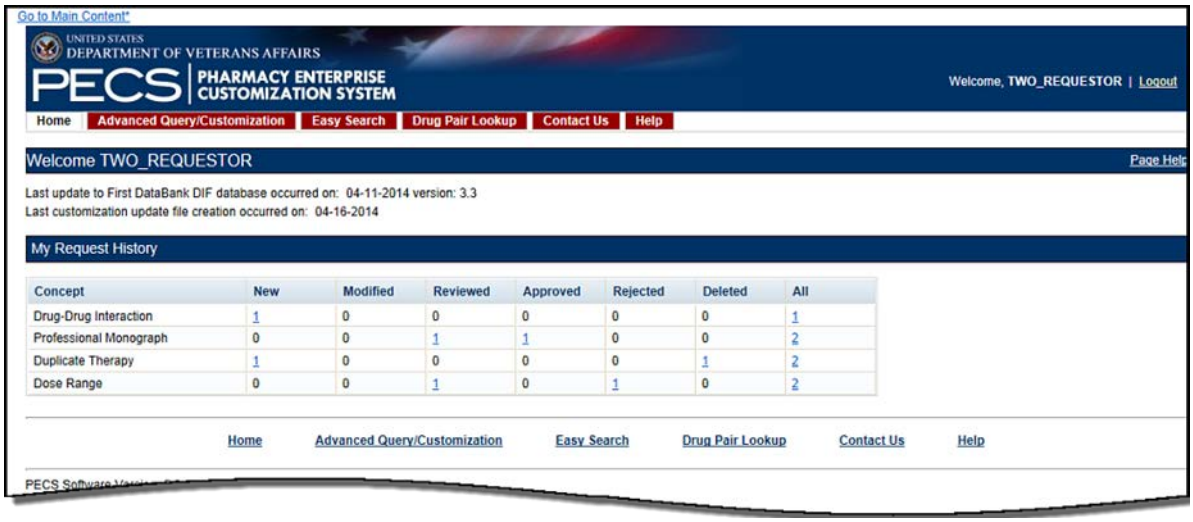
A Requestor performs the following tasks related to customization requests:

- Create a Customization Request
- Modify Customization Requests

8.1.1 Requestor Home Page

The Home Page for the Requestor role only displays links to the customization requests made by the current user.

Figure 34: Requestor's Home Page



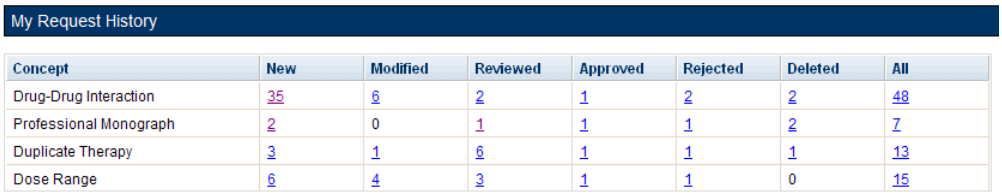
The following information is displayed on the Requestor Home tab:

- My Request History

8.1.2 My Request History: Requestor

My Request History displays customization requests created by the current user. The results are displayed by Action Status of the requests.

Figure 35: My Request History



Concept	New	Modified	Reviewed	Approved	Rejected	Deleted	All
Drug-Drug Interaction	35	6	2	1	2	2	48
Professional Monograph	2	0	1	1	1	2	7
Duplicate Therapy	3	1	6	1	1	1	13
Dose Range	6	4	3	1	1	0	15

The following table defines the columns found on the My Request History window.

Table 7: My Request History Columns

Column Name	Column Definition
New	The number of active records in the "New" status created by the current user.
Modified	The number of active records in the "Modified" status created by the current user.
Reviewed	The number of active records in the "Reviewed" and "Delete Reviewed" status created by the current user.
Approved	The number of active records in the "Approved" status created by the current user.
Rejected	The number of active records in the "Rejected" status created by the current user.
Deleted	The number of active records in the "Deleted" status created by the current user.
All	The number of all active records in any status, created by the current user.

Clicking the links within the summary table open pre-defined queries to provide details of the requests. For example, clicking the New - Professional Monograph link will display a query with the appropriate criteria and the query results: Concept = Professional Monograph, Request Submitted By = <current user>, Action Status = New.

Figure 36: Home Tab Summary - Pre-Defined Query

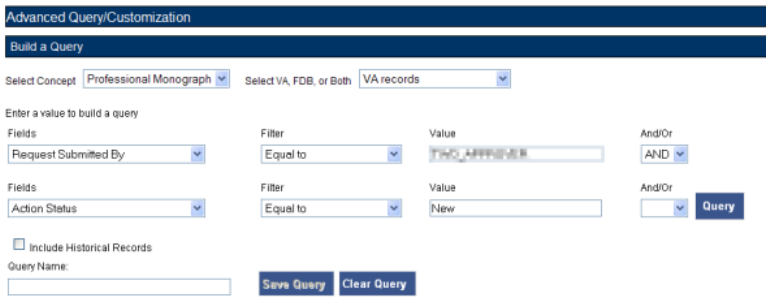


Figure 37: Query Results

Select	Monograph Title	Monograph ID	Action Status	Action Date	Action Performed By
Active	Fentanyl/MAOIs va 6152 history	151700	New	2012-11-14 13:59:39	
Active	Dronedarone/Carbamazepine; Phenobarbital; Phenytoin	151126	New	2012-02-23 15:18:42	

8.1.3 Additional Tools Available to Requestors

In addition to the Home tab, Requestors see the following tabs on their Home page:

- Advanced Query/Customization – See Using Advanced Query/Customization for additional information.

- Easy Search – see Easy Search for additional information.
- Drug Pair Lookup – see Drug Pair Lookup for additional information.
- Contact Us – see Contact Us for additional information.
- Help – see Online Help for additional information.

8.2 Approver

The PECS Approver creates and processes customization requests. In addition to being able to request a customization themselves, they can also Review, Modify, Reject, Approve, and Delete customization requests made by other PECS users.

An Approver performs the following tasks related to customization requests:

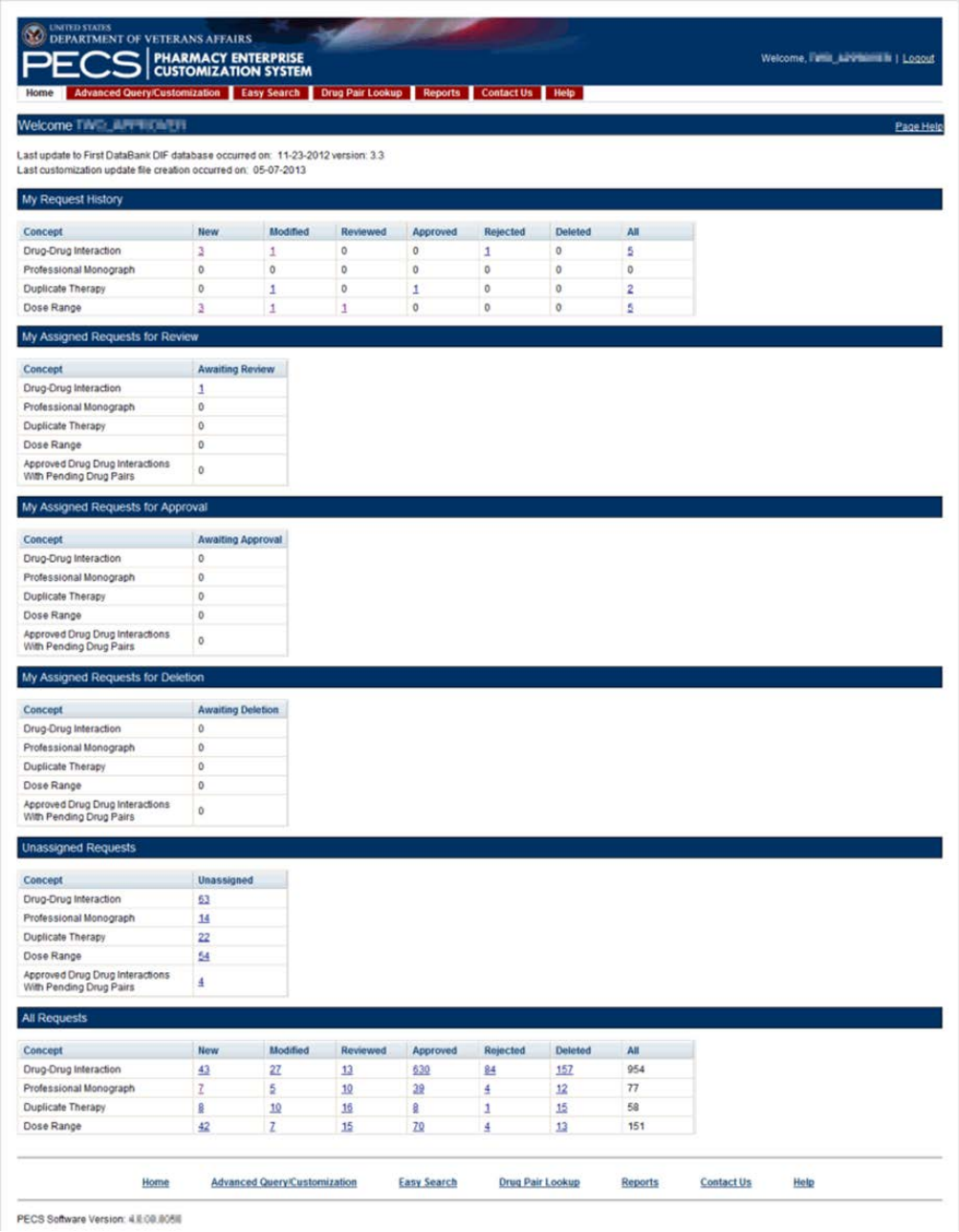
- Create a Customization Request
- Modify Customization Requests
- Review Customization Requests
- Approve Customization Requests
- Reject Customization Requests
- Delete Customization Requests

8.2.1 Approver Home Page

The Home Page for the Approver role displays links to customization requests in many different states:

- Customization requests made by the current user (My Request History: Approver)
- Customization requests made by other users that are assigned to the current user for review (My Assigned Requests for Review)
- Customization requests made by other users that are assigned to the current user for approval (My Assigned Requests for Approval)
- Customization requests made by other users that are assigned to the current user for deletion (My Assigned Requests for Deletion)
- Customization requests made by other users that are not currently assigned to an Approver (Unassigned Requests)
- Customization requests made by any user in any state (All Requests)

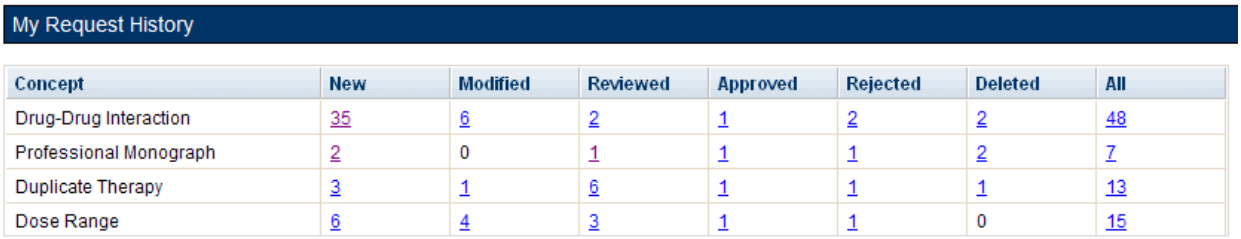
Figure 38: Approver's Home Page



8.2.2 My Request History: Approver

My Request History displays active customization records created by the current user (Requestor and Approver roles only). The results will be broken down into numbers of active records, created by the current user by the following Action Statuses: New, Modified, Reviewed, Approved, Rejected, Deleted and All.

Figure 39: My Request History


My Request History

Concept	New	Modified	Reviewed	Approved	Rejected	Deleted	All
Drug-Drug Interaction	35	6	2	1	2	2	48
Professional Monograph	2	0	1	1	1	2	7
Duplicate Therapy	3	1	6	1	1	1	13
Dose Range	6	4	3	1	1	0	15

The following table defines the columns found on the My Request History window.

Table 8: My Request History Columns

Column Name	Column Definition
New	The number of active records in the "New" status created by the current user.
Modified	The number of active records in the "Modified" status created by the current user.
Reviewed	The number of active records in the "Reviewed" and "Delete Reviewed" status created by the current user.
Approved	The number of active records in the "Approved" status created by the current user.
Rejected	The number of active records in the "Rejected" status created by the current user.
Deleted	The number of active records in the "Deleted" status created by the current user.
All	The number of all active records in any status, created by the current user.

Clicking the links within the summary table open pre-defined queries to provide details of the requests. For example, clicking the New - Professional Monograph link will display a query with the appropriate criteria and the query results: Concept = Professional Monograph, Request Submitted By = <current user>, Action Status = New.

Figure 40: Home Tab Summary - Pre-Defined Query

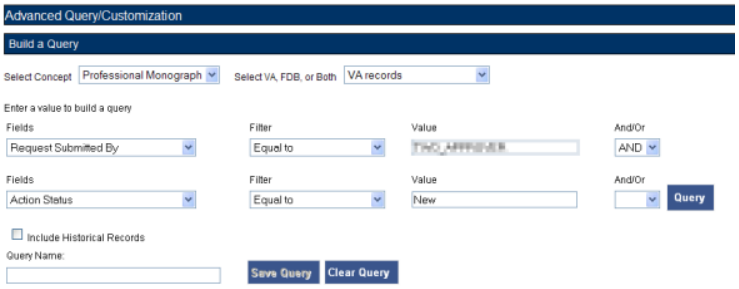


Figure 41: Query Results

VA Tables Results

Export

Select	Monograph Title	Monograph ID	Action Status	Action Date	Action Performed By
Active	Fentanyl/MAOIs va 6152 history	151700	New	2012-11-14 13:59:39	
Active	Dronedarone/Carbamazepine; Phenobarbital; Phenytoin	151126	New	2012-02-23 15:18:42	

8.2.3 My Assigned Requests for Review

My Assigned Requests for Review are active customization records assigned to the current user to be reviewed. The Awaiting Review count is the number of records that are in the "New" or "Modified"

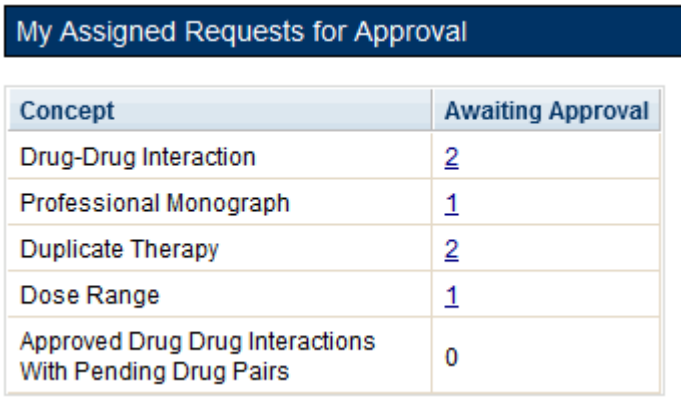
status, that have been assigned to the current user for review. To see the records, click the corresponding link.

Figure 42: My Assigned Request for Review Example

8.2.4 My Assigned Requests for Approval

My Assigned Requests for Approval are active customization records assigned to the current user to be approved. These records have been reviewed by another Approver. To see the records, click the corresponding link.

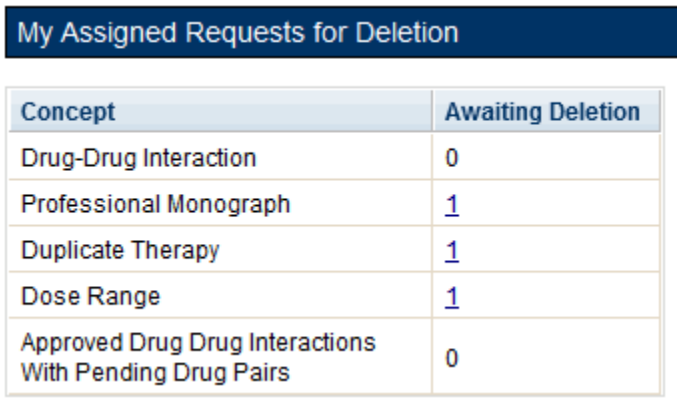
Figure 43: Approver's List of Requests for Approval



8.2.5 My Assigned Requests for Deletion

My Assigned Requests for Deletion are active customization records assigned to the logged in user to be deleted. The records have been "delete reviewed" by another "Approver" in the system. To see the records, click the corresponding link.

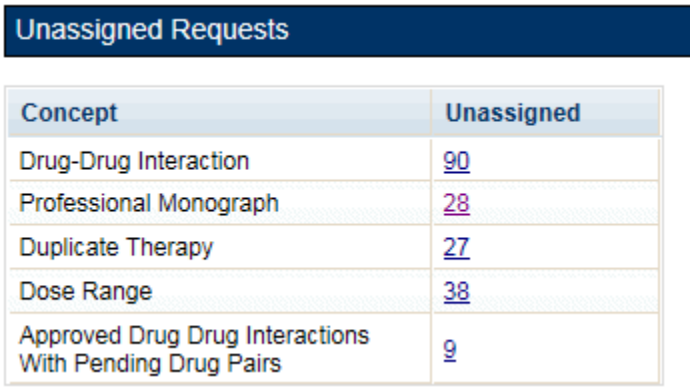
Figure 44: Approver's List of Requests for Deletion



8.2.6 Unassigned Requests

Unassigned Requests are either New, Modified, or Reviewed customization requests that have not been assigned to any user. To see the records, click the corresponding link.

Figure 45: Approver's List of Unassigned Requests



8.2.7 All Requests

All Requests displays all customization requests currently in the system by Action Status. The result detail will display the active records associated with the selected custom table summary.

The categories are:

Table 9: All Request Columns

Column Name	Column Definition
New	The number of active records in the "New" status.
Modified	The number of active records in the "Modified" status.
Reviewed	The number of active records in the "Reviewed" and "Delete Reviewed" status.

Column Name	Column Definition
Approved	The number of active records in the "Approved" status.
Rejected	The number of active records in the "Rejected" status.
Deleted	The number of active records in the "Deleted" status.
All	The number of all active records in any status.

8.2.8 Additional Tools Available to Approvers

In addition to the Home tab, Approvers see the following tabs on their Home page:

- Advanced Query/Customization – See Using Advanced Query/Customization for additional information.
- Easy Search – see Easy Search for additional information.
- Drug Pair Lookup – see Drug Pair Lookup for additional information.
- Reports – see Reports for additional information.
- Contact Us – see Contact Us for additional information.
- Help – see Online Help for additional information.

8.3 Release Manager

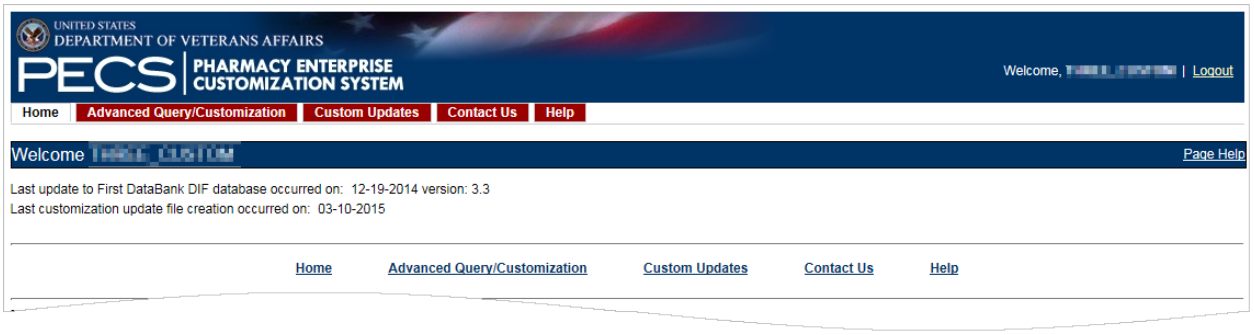
The primary task of a PECS Release Manager is to create Custom Updates. Since they are not directly involved in the creation or processing of customization requests, the customization-related panels that appeared on the Requestor and Approver Home Pages do not appear on the Release Manager Home page.

Custom Updates are created at the instruction of the PECS Administrator and/or the National Drug File (NDF) Support Group. Once the Custom Update has been created, the Release Manager should send an Outlook email to the PECS Administrators.

8.3.1 Release Manager Home Page

The Home Page for the Release Manager does not display links associated with customization requests.

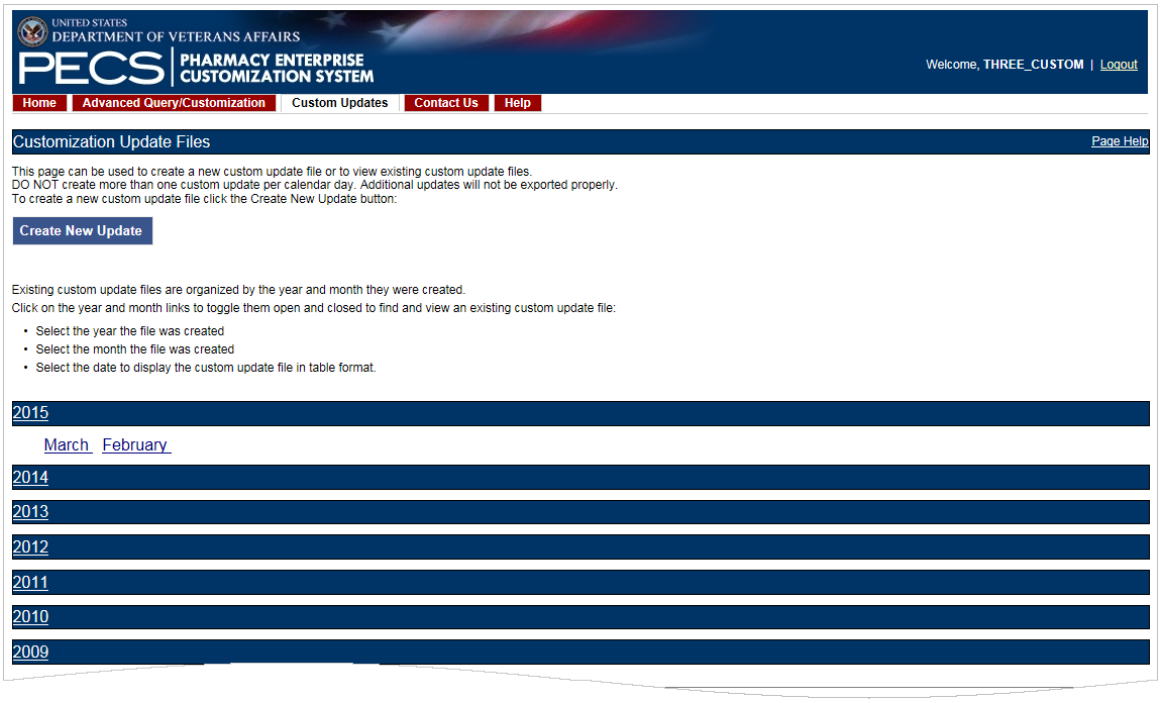
Figure 46: Release Manager's Home Page



8.3.2 Custom Update Tab

The Custom Update tab contains the Release Manager-specific functions and is available only to PECS Release Managers.

Figure 47: The Custom Update Tab



8.3.3 Custom Update Overview

A Custom Update is a set of files that

- Transmit Approved customization requests to MOCHA (via DATUP) so that the customizations can be used in Order Check decisions.
- Transmit contain Deleted customization requests so that previously approved customizations can be removed from the MOCHA Order Check decision process
- Transmit updates received from FDB

8.3.4 Update Files Explained

A Custom Update produces two files. The Full Custom Update includes the entire FDB data distribution. The Incremental Update file contains updates from FDB to their database, as well as Approved and Deleted customizations from PECS. These updates will be incorporated in the national and regional databases for use in order check decisions (MOCHA).

Custom Update files use the following file naming standard:

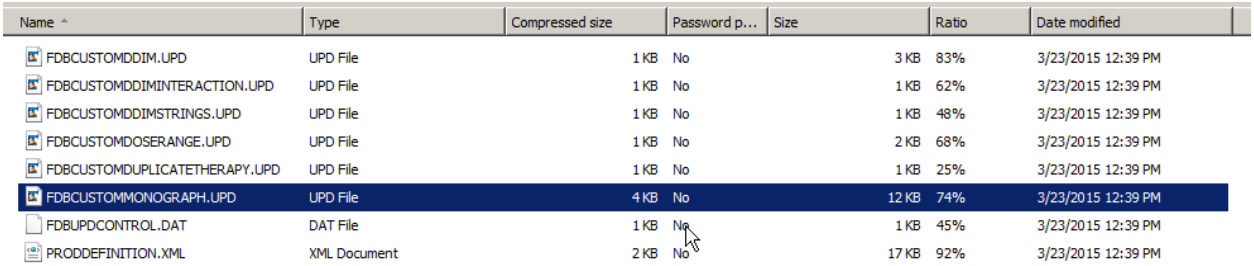
CstmUpdFile_{FDB Version}.{PECS Generated Version Number}_{Date/Time Stamp}.zip

For example, the CstmUpdFile_3.2.751_20120503154622.zip has an FDB Version number of "3.2," a PECS-generated Version Number of "751," and was created on May 3, 2012 at 15:46:22 (military time). The contents of the zip file will determine if this is an Incremental or a Full update.

Incremental Update File

The Incremental Update File contains just the updates delivered by FDB and Approved and Deleted customizations from PECS. The custom zip file contains a proddefinition.xml, FDBPRODCONTROL.DAT and several data files that have an extension of UPD.

Figure 48: Custom Update Zip File



Name	Type	Compressed size	Password p...	Size	Ratio	Date modified
FDBCUSTOMDDIM.UPD	UPD File	1 KB	No	3 KB	83%	3/23/2015 12:39 PM
FDBCUSTOMDDIMINTERACTION.UPD	UPD File	1 KB	No	1 KB	62%	3/23/2015 12:39 PM
FDBCUSTOMDDIMSTRINGS.UPD	UPD File	1 KB	No	1 KB	48%	3/23/2015 12:39 PM
FDBCUSTOMDOSERANGE.UPD	UPD File	1 KB	No	2 KB	68%	3/23/2015 12:39 PM
FDBCUSTOMDUPLICATETHERAPY.UPD	UPD File	1 KB	No	1 KB	25%	3/23/2015 12:39 PM
FDBCUSTOMMONOGRAPH.UPD	UPD File	4 KB	No	12 KB	74%	3/23/2015 12:39 PM
FDBUPDCONTROL.DAT	DAT File	1 KB	No	1 KB	45%	3/23/2015 12:39 PM
PRODDEFINITION.XML	XML Document	2 KB	No	17 KB	92%	3/23/2015 12:39 PM

The proddefinition.xml file is a file from FDB that defines the table structures for the FDB tables in an XML format. The FDBUPDCONTROL.DAT file contains control information used by the FDB Data Updater software when determining if this Incremental update should be applied to a database. The UPD files contain data updates for a particular FDB table in the database.

Here is a sample: Note that the “D”, “C”, and “A” in the left column mean Delete, Change, and Add, respectively.

Figure 49: Custom Update Text File

```
H|fdb_custom_ddim|44|0|2|3.3|W|20150320|USA
F|10|1|rtgenid1|2|rtgenid2|3|interactionid|4|seqno|5|uicategory1|6|uicategory2|7|uicategory3|8|uicateg
ory4|9|uicategory5|10|uicategory6
P|4|1|2|3|4
D|1051388|1052759|2021496|1
D|1052759|1051388|2021496|2
A|2102962|1050197|2021486|1|'VA'|''|''|''|''|''
A|1050197|2102962|2021486|2|'VA'|''|''|''|''|''
A|11538519|12584957|2021486|1|'VA'|''|''|''|''|''
A|12584957|11538519|2021486|2|'VA'|''|''|''|''|''
A|11538519|23070717|2021486|1|'VA'|''|''|''|''|''
A|23070717|11538519|2021486|2|'VA'|''|''|''|''|''
A|11538519|1050621|2021486|1|'VA'|''|''|''|''|''
```

Full Update File

The Full Update File contains the complete FDB distribution. The files are:

- CTVERSION.TXT
- FDBCUSTOMDDIM.TXT
- FDBCUSTOMDDIMINTERACTION.TXT
- FDBCUSTOMDDIMSTRINGS.TXT
- FDBCUSTOMDOSERANGE.TXT
- FDBCUSTOMDUPLICATETHERAPY.TXT
- FDBCUSTOMMONOGRAPH.TXT
- FILECOUNTS.DAT
- PRODDEFINITION.XML

Here is a sample of the full update of Drug-Drug Interactions:

Figure 50: Custom Drug-Drug Interaction Full Update File

```
1048627|1050000|2004892|1|VA|||||
1050000|1048627|2004892|2|VA|||||
1048627|1050001|2004892|1|VA|||||
1050001|1048627|2004892|2|VA|||||
1048627|1050014|2004892|1|VA|||||
1050014|1048627|2004892|2|VA|||||
1048627|1050015|2004892|1|VA|||||
1050015|1048627|2004892|2|VA|||||
1048627|1052651|2004892|1|VA|||||
1052651|1048627|2004892|2|VA|||||
1048627|23070090|2004892|1|VA|||||
23070090|1048627|2004892|2|VA|||||
```

8.3.5 Create a Custom Update

Note:	Custom Updates can be only be created by Release Managers

To create a Custom Update:

1. Click the Custom Updates tab:
2. Click Create New Update:
3. After processing, the two new update files will appear in the list.

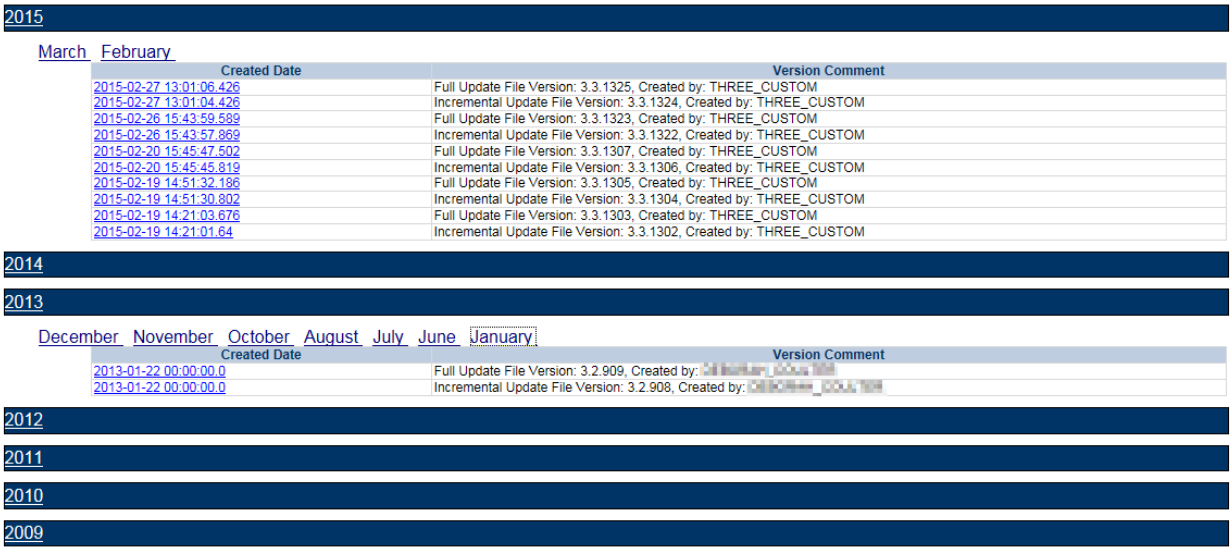
Select	Created Date	Version Comment
Download	04-13-2012	Incremental Update File Version: 3.2.712, Created by: THREE_CUSTOM
Download	04-13-2012	Full Update File Version: 3.2.713, Created by: THREE_CUSTOM
Download	04-11-2012	Incremental Update File Version: 3.2.710, Created by: THREE_CUSTOM
Download	04-11-2012	Full Update File Version: 3.2.711, Created by: THREE_CUSTOM

4. Verify today's date in Created Date column. The dates in the Created Date column should match the current date.
5. If an error message is received, report it to PECS Administrator. See Contact Us for additional information.

8.3.6 Review Custom Update History

The existing Custom Updates are organized by Year and Month. Click the Year to display the months containing custom updates for that year, then click a month to display the custom updates performed during that month. The custom updates for more than one month can be displayed simultaneously. Clicking a month a second time will collapse (hide) the custom updates for that month.

Figure 51: Existing Custom Updates by Year and Month



8.3.7 Additional Tools Available to Release Managers

In addition to the Home tab and Custom Updates, Release Managers role see the following tabs on their Home page:

- Advanced Query/Customization – See Using Advanced Query/Customization for additional information.

- Contact Us – see Contact Us for additional information.
- Help – see Online Help for additional information.

8.4 Administrator

The PECS Administrator performs limited maintenance on the PECS system through the Administration tab. The administrator can modify the page display for the PECS records (both FDB and VA). Demote existing Approvers, remove Null Drug Pairs, and change what is displayed on the Contact Us page. The Administration tab displayed only to Administrator users.

Since they are not directly involved in the creation or processing of customization requests, the customization-related panels that appeared on the Requestor and Approver Home Pages do not appear on the Administrator Home page.

The unique tasks performed by an Administrator are:

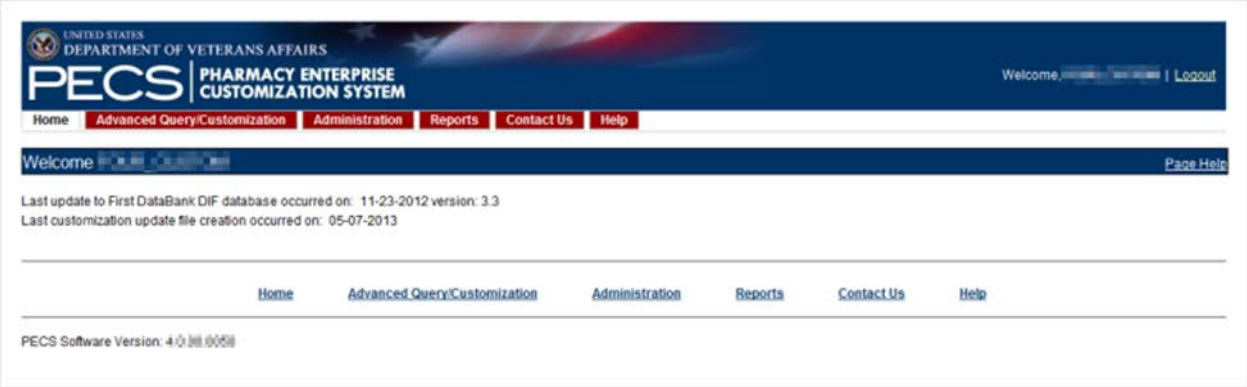
- Customize Settings
- Change Field Display Order
- Null Drug Pair Removal Process
- Editing Contact Us

Most Administrator functions are performed on the Administration tab. Editing the Contact Us page occurs on the Contact Us page itself.

8.4.1 Administrator Home Page

The Home Page for the Administrator does not display links associated with customization requests.

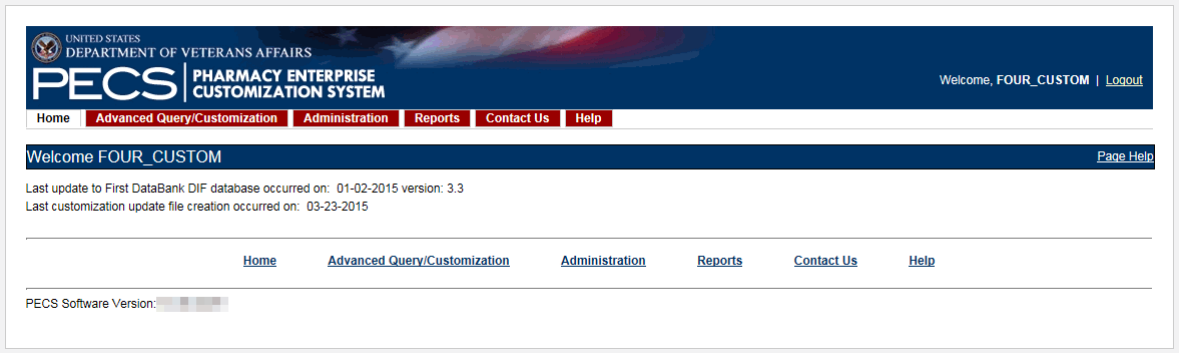
Figure 52: Administrator's Home Page



8.4.2 Administration Tab

The Administration tab contains most of the Administrator-specific functions and is available only to PECS Administrators.

Figure 53: The Administration Tab



8.4.3 Customize Settings

The Customize Settings panel allows Administrators to change the label name for the Field (Display Name), and whether the field should appear in Queries, Detail Pages, and Reports. It also allows you to change the order the individual fields are displayed on their respective pages.

To access Customize Settings:

1. Log in as an Administrator.

Click the Administration tab.

Click the appropriate concept to change the way data appears in relation to that concept.

Figure 54: The Customize Setting Panel

Customize Settings Table Description

There are currently five Customize Settings pages, one for each concept: Drug Pair, Drug-Drug Interaction, Dose Range, Duplicate Therapy and Professional Monograph.

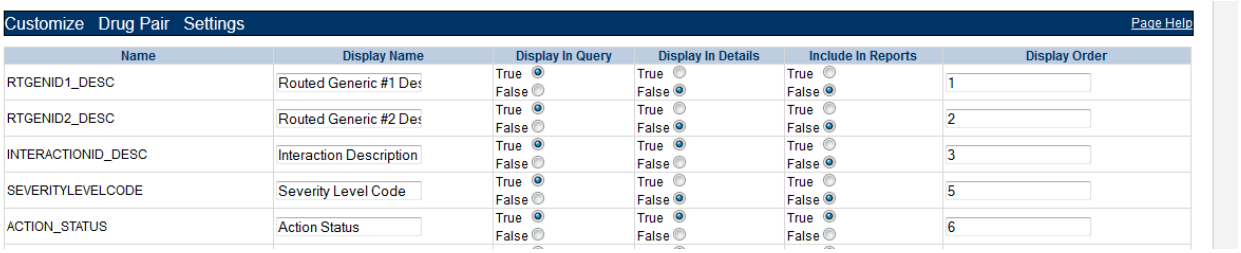
Table 10: Customize Table Settings Columns

Column	Description
Name	Name is the database field name for items displayed for the selected concept. Name cannot be changed; it identifies the field in the database table.
Display Name	Display Name is what appears within PECS for the field defined by the entry in the Name column. The contents of Display Name will appear in query selection, data entry field and reports for the selected table.
Display in Query	Display in Query allows you to set if the field will be displayed in the Advance Query/Customization results tables. Some fields are required and cannot be turned off.
Display in Details	Display in Details allows you to set if the field will be displayed on the Detail page of the selected concept.
Include in Reports	Include in Reports allows you to set if the field will be displayed in any applicable reports.

Column	Description
Display Order	A numeric value designating the order the field will be displayed in.

> **Warning:** Changes made on the Settings page will affect all PECS users. Please proceed cautiously.

Figure 55: Customize Settings Example (Drug Pairs)



Change Field Display Name

To change how the name of a field is displayed on the page, modify the contents of the Display Name field.

1. In the Customize <Concept> List, find the name of the database field you want to change.
2. Modify the contents of the field in the Display Name column.
3. Repeat the process as necessary.
4. Click Save to save your changes; click Cancel to abandon the changes and return to the Settings page.

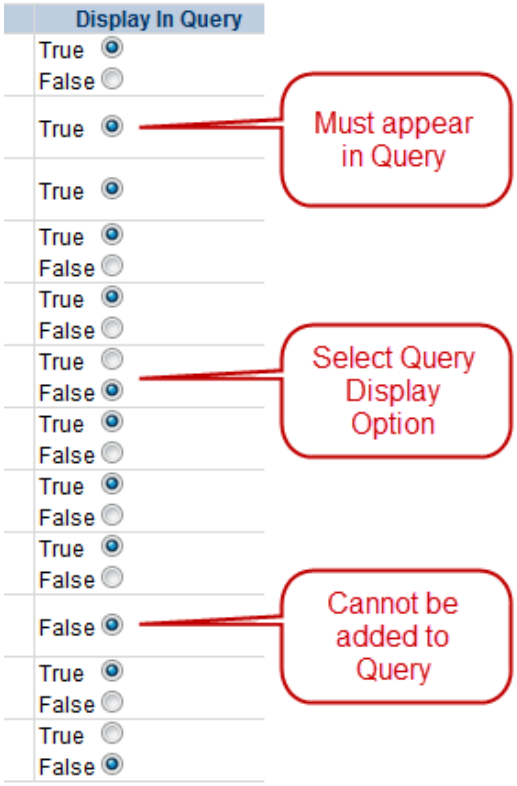
> **Note:** Cancel is immediate; you will not be warned that you are about to lose your changes.

Add/Remove Field from Query Options

To add (or remove) a field from Query options

1. In the Customize <Concept> List, find the name of the database field you want to change.
2. In the Display in Query column, select True to display the field in Query options, select False to prevent the field from displaying in Query options.

> **Note:** "Display in Query" options are not available for all fields; some fields are explicitly required to be displayed in the Query options while others are forbidden from being displayed. In these cases, the required display option (True or False) will be the only options displayed and cannot be changed.



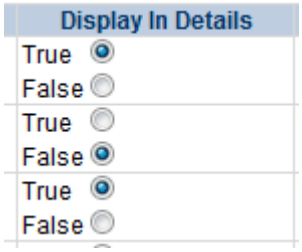
3. Repeat the process as necessary.
4. Click Save to save your changes; click Cancel to abandon the changes and return to the Settings page.

Note:	Cancel is immediate; you will not be warned that you are about to lose your changes.

Add/Remove Field from Detail Pages

To add (or remove) a field from Detail pages

1. In the Customize <Concept> List, find the name of the database field you want to change.
2. In the Display in Detail column, select True to display the field on the concept Detail page, select False to prevent the field from displaying on the concept Detail page.



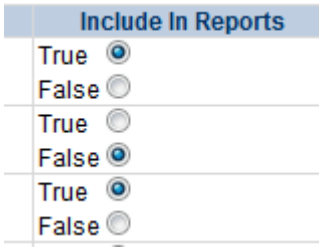
3. Repeat the process as necessary.
4. Click Save to save your changes; click Cancel to abandon the changes and return to the Settings page.

Note:	Cancel is immediate; you will not be warned that you are about to lose your changes.

Add/Remove Field from Reports

To add (or remove) a field from Reports

1. In the Customize <Concept> List, find the name of the database field you want to change.
2. In the Include in Reports column, select True to display the field on concept-related reports, select False to prevent the field from displaying on the concept-related reports.



3. Repeat the process as necessary.
4. Click Save to save your changes; click Cancel to abandon the changes and return to the Settings page.

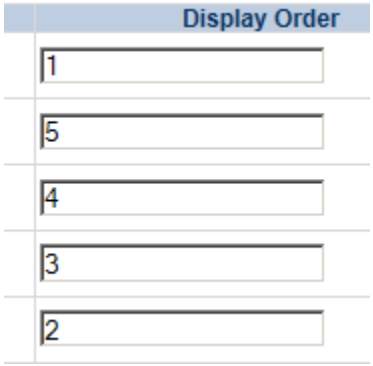
Note: Cancel is immediate; you will not be warned that you are about to lose your changes.

8.4.4 Change Field Display Order

To change the order that the fields appear in Detail pages and drop-down lists, change the adjacent number in the Display Order field. Note that changing the Display Order is an entirely manual process; each field must be changed individually and the order is not validated in any way. Multiple fields can have the same display order.

When all changes are complete, click Save; click Cancel to abandon the changes and return to the Settings page.

Figure 56: Display Order List

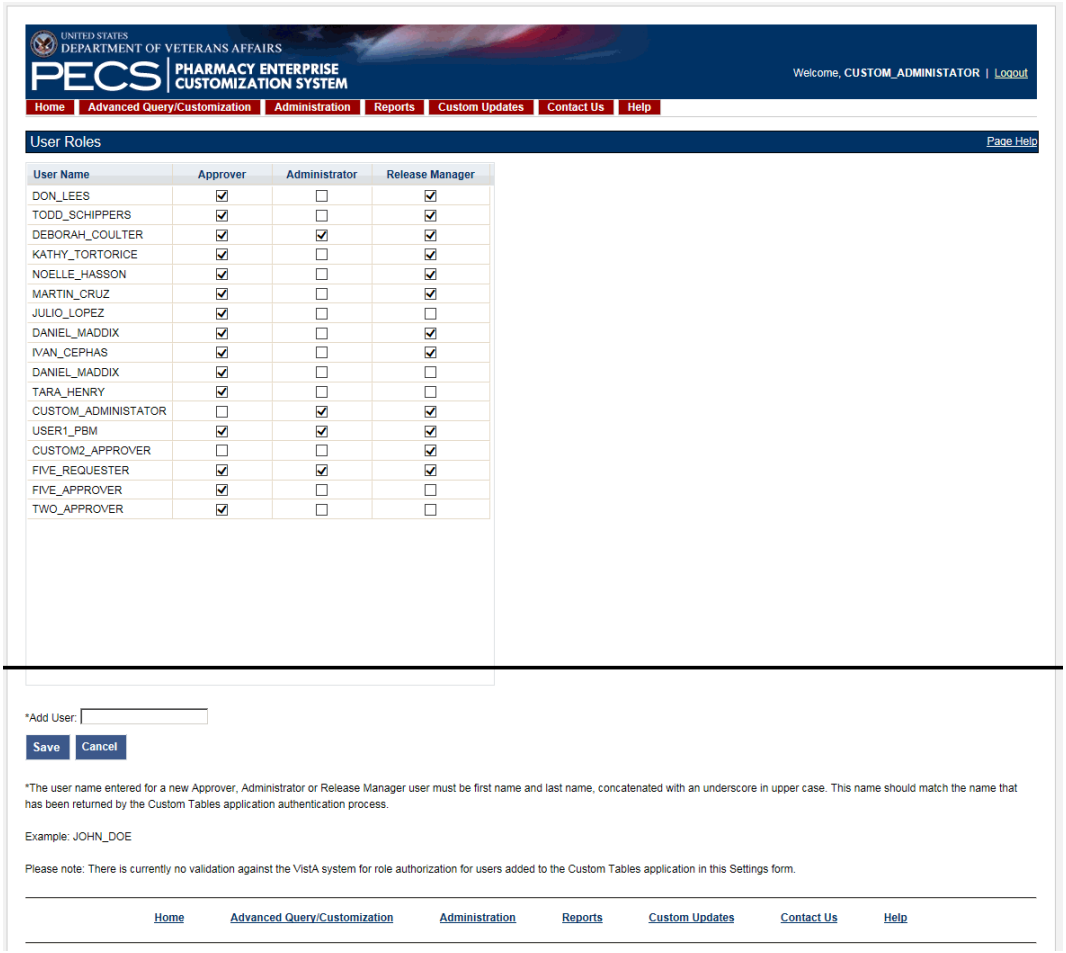


8.4.5 Update User Roles

PECS Administrators can add PECS users and modify the roles of existing users. By default, PECS users are assigned Requestor privileges. Once added, the user privileges can be elevated to Approver, Release Manager, and Administrator by an Administrator provided the user also has the corresponding VistA Security Keys. Privileges can also be removed from a user at any time.

NOTE	**Release Manager or Approvers should immediately be assigned the appropriate roles to avoid giving them access to inappropriate privileges (creating customizations).**

Figure 57: Update User Roles

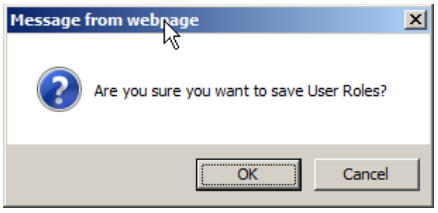


8.4.5.1 Add a PECS User

Administrators can add users to PECS. In order to successfully log in, the user must have a VistA account. See Identity Management for additional information.

To add a user to PECS

1. From the Administration tab, click Update User Roles.
2. In the Add User field, type in the name of the person you want to add. The name must be in ALL CAPS and include both the first and last name (in that order) separated by an underscore. Examples: FIRSTNAME_LASTNAME, JOHN_DOE.
3. Click Save.
4. Click OK to add the user; click Cancel to abandon the add user operation.



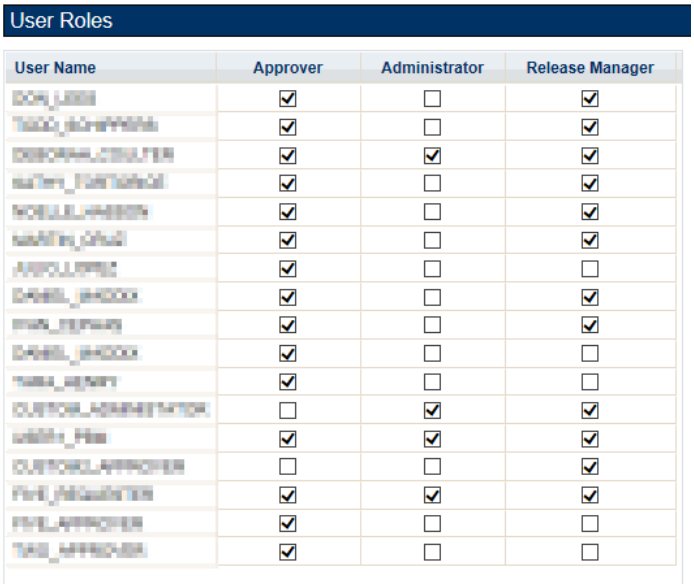
5. If the add user operation is successful, an informational message will appear confirming it. If the user you are trying to add already exists, the following error message is displayed: ”The user you are attempting to add already exists. Please review and/or update this user’s existing settings.”

8.4.5.2 Add User Roles

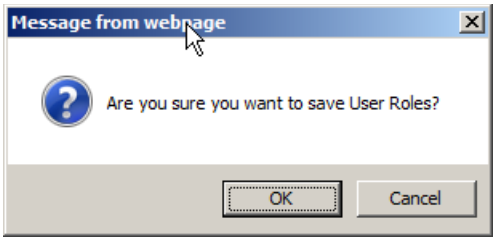
To add user roles

1. From the Administration tab, click Update User Roles.

2. Select one or more roles for one or more users from the User Name list. Remember—if the user does not have the appropriate VistA Security Key, the enhanced privileges will not be granted. If you are not seeing the tabs that you think you should be seeing based on your role, check to be sure you have the appropriate VistA Security Keys.



3. Click Save.
4. Click OK to add the user roles; click Cancel to abandon the add role operation and return to the Settings page.

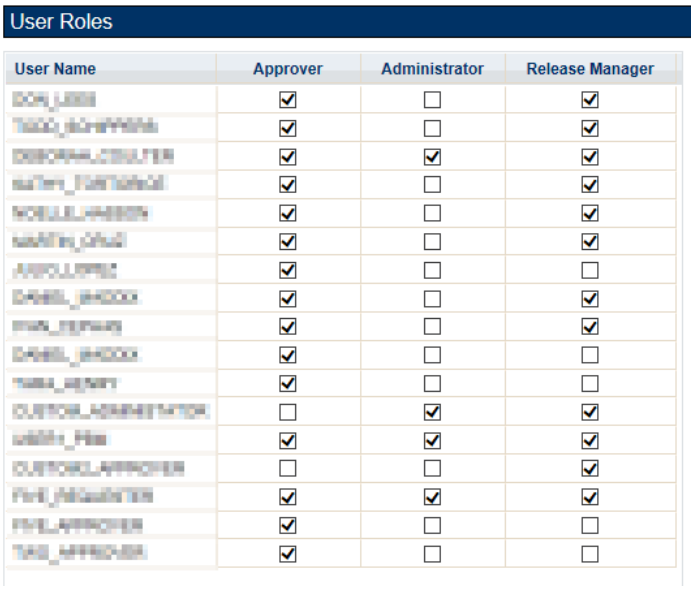


8.4.5.3 Remove User Roles

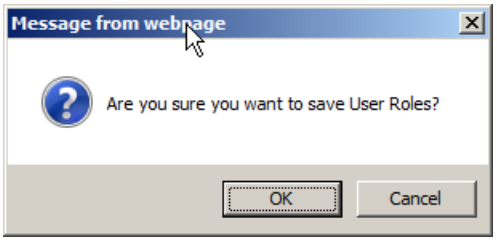
To remove a role from a user

1. From the Administration tab, click Update User Roles.

2. Clear one or more roles for one or more users from the User Name list.



3. Click Save.
4. Click OK to add the user roles; click Cancel to abandon the add role operation and return to the Settings page.



8.4.6 Null Drug Pair Removal Process

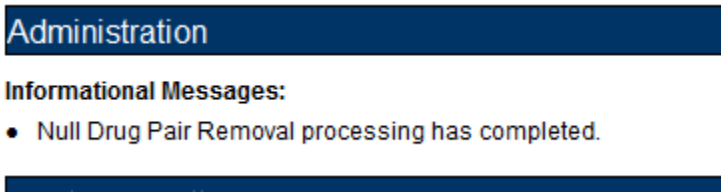
The Null Drug Pair Removal changes the status of any VA Drug Pair that contains a null Routed Generic to “Deleted”, and removes the null drug pairs from their associated VA Drug-Drug Interactions. VA Drug Pairs have null Routed Generics because one or both of the Routed Generics that make up the Drug Pair has been deleted by FDB. PECS applies the FDB Routed Generic deletes as part of the weekly FDB-DIF update, so it is recommended that the Null Drug Pair Removal process be run weekly, after the FDB-DIF update completes.

The Administrator may initiate this process at any time by clicking the “Null Drug Pair Removal” button on the following window:

Figure 58: Null Drug Pair Removal Button on Administration Tab

When the process is complete, a message will appear at the top of the page to indicate that the process has completed.

Figure 59: Null Drug Pair Removal Process Complete



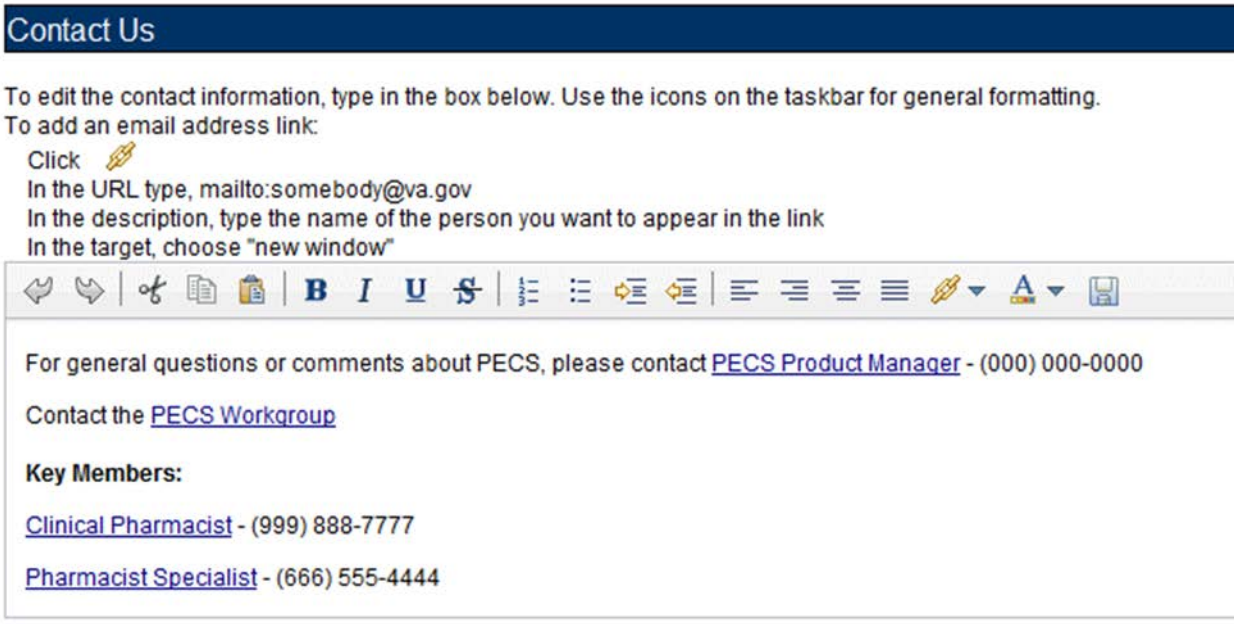
Note:	The Null Drug Pairs Customization Report can be used to identify *approved* VA Drug-Drug Interactions that contain null Drug Pairs. However, the Null Drug Pair Removal Process removes null drug pairs from *any* VA Drug-Drug Interaction, regardless of status. All VA Custom drug pairs that contain a null routed generic drug are updated as follows: the action status of the drug pair is changed to "Deleted" and the current action reason is "FDB Deleted," with the value of the FDB issue date when the custom drug pair was deleted. The FDB issue date is the date associated with the FDB update file that includes the deletion.

8.4.7 Editing Contact Us

In addition to viewing it, Administrator users can edit the content of the Contact Us page. To edit the Contact Us page:

1. Click the Contact Us tab.
2. Click the Edit Content link on the right side of the page. This will display a word processor-like editor.

3. Add or change the content on the page. To add or edit a link, see the appropriate sections below.



4. When the edits are complete, click the Save button.

8.4.8 Add a Contact Link

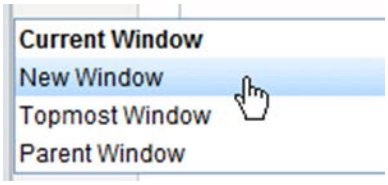
To add a link while editing the Contact Us page:

1. Click the Create Link button. This will display the Link Properties dialog box.

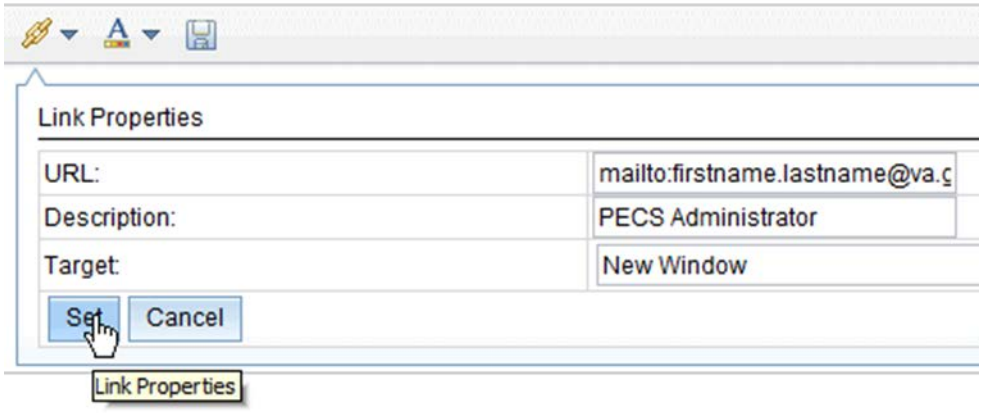
2. Enter the mailto URL for the person whose contact information you are adding in the URL field. A mailto URL is the word "mailto" followed by a colon followed by the appropriate email address. VA email addresses are usually (but not always) firstname.lastname@va.gov. Verify the contact information in the Outlook Global Address List (GAL) for the correct email address. Example: mailto:firstname.lastname@va.gov.

3. Enter the contact name in the Description field. This is the text the user will actually see on the Contact Us page.

4. On the Target list, select New Window.



5. Click the Set button.



8.4.9 Edit a Contact Link

To modify an existing contact link while editing the Contact Us page:

1. Double-click the existing link.
2. Make the necessary adjustments in the Link Properties dialog box.
3. Click the Set button.

8.4.10 Additional Tools Available to Administrators

In addition to the Home tab and Administration, Release Managers role see the following tabs on their Home page:

- Advanced Query/Customization – See Using Advanced Query/Customization for additional information.
- Contact Us – see Contact Us for additional information.
- Help – see Online Help for additional information.

(This page included for two-sided copying.)

9 Easy Search

Easy Search provides a simple way to display commonly-requested PECS information. Easy Search differs from other methods for finding information in that the results are display-only; the records displayed as a result of an Easy Search query cannot be modified. However, in some cases, a link is provided to an editable version of the resulting records.

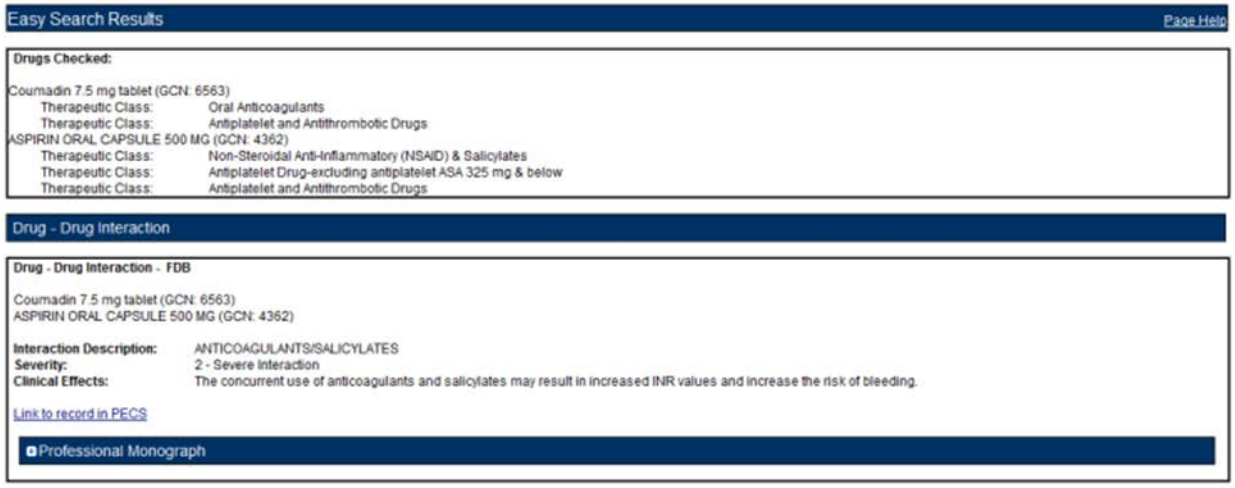
The Easy Search queries are handled slightly differently depending on which type of search you want to perform. There are three types of Easy Search Query:

- Dose Range
- Drug-Drug Interaction with Professional Monograph and/or Duplicate Therapy
- Interactions for a Single Drug

9.1 Easy Search Drug-Drug Interaction with Professional Monograph and/or Duplicate Therapy Query

The Drug-Drug Interaction with Professional Monograph and/or Duplicate Therapy query allows the user to easily search for any Drug-Drug Interaction (and associated Professional Monographs) and/or Duplicate Therapy records that may exist within PECS for at least two and up to ten drugs that are selected by the user. This page also allows the user to search for Duplicate Therapy information for any drug they select.

Figure 60: Easy Search Results Page

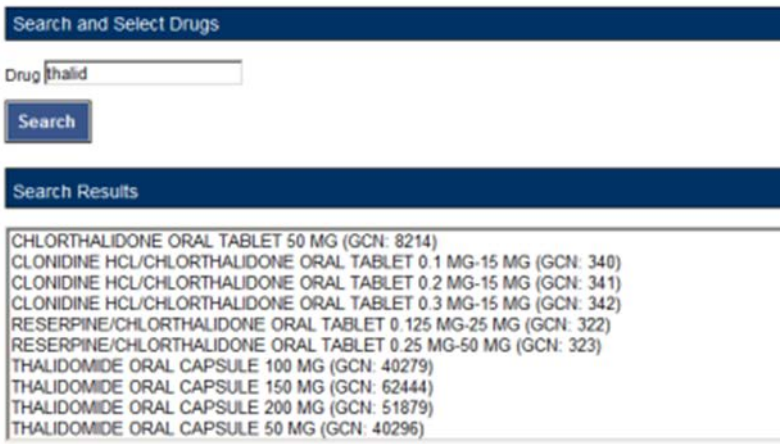


To perform a Drug-Drug Interaction Easy Search Query

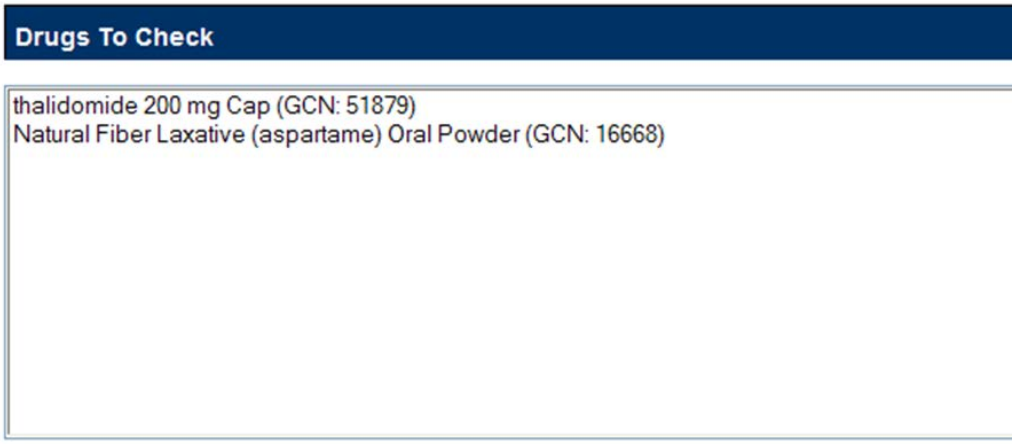
1. From the Select Search Type drop-down list, select 'Drug-Drug Interaction with Professional Monograph and/or Duplicate Therapy.' After selecting this value, the system will then display the 'Select Information Type', 'Search and Select Drugs', 'Search Results' and 'Drugs to Check' panels.

2. Choose the appropriate options from the Select Information Type panel:
    - Select Drug-Drug Interaction with Professional Monograph to find Drug-Drug Interactions with the associated Professional Monograph. If you select the Drug-Drug Interaction with Professional Monograph checkbox, the system will display two options: Display Severity Levels 1 (contraindicated) and 2 (severe) and Display All Severity Levels. You must select one of these options.
    - Select Duplicate Therapy checkbox to display Duplicate Therapy records (if any) for the selected drugs.

3. Enter a partial string or whole drug name into the Drug field and click Search. The system returns all drugs, that is, both routed generic drugs and dispensable drugs that contain the partial string/whole drug name entered.



4. Select a drug from the Search Results window and click Add to Drugs to Check. The selected drug will appear in the Drugs to Check box.



5. If necessary, repeat the Search/Select process to add more drugs to the check. For Drug-Drug Interaction queries, you must select at least two drugs and can select up to ten. For Duplicate Therapy, you can select multiple drugs to find duplicate therapies; you can also select a single drug to display the associated Therapeutic Class.
6. When all drugs have been added, click Submit. The query results will appear on a results page.

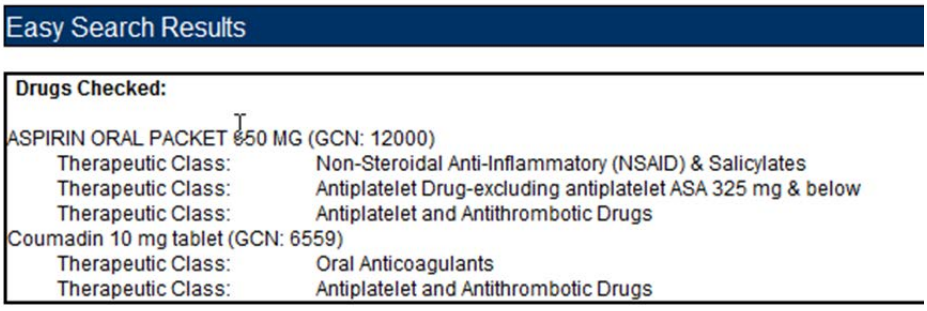
Results

The Drug-Drug Interaction with Professional Monograph and/or Duplicate Therapy query will produce the following results based on the selections made in the query.

Drugs Checked

- All Drugs that were selected by the User are listed first on the page after 'Drugs Checked'.
- After each drug name, the Therapeutic Class(es) that drug belongs to are listed for reference.

Figure 61: Easy Search Results for DDI with PM, Drugs Checked



Drug-Drug Interaction

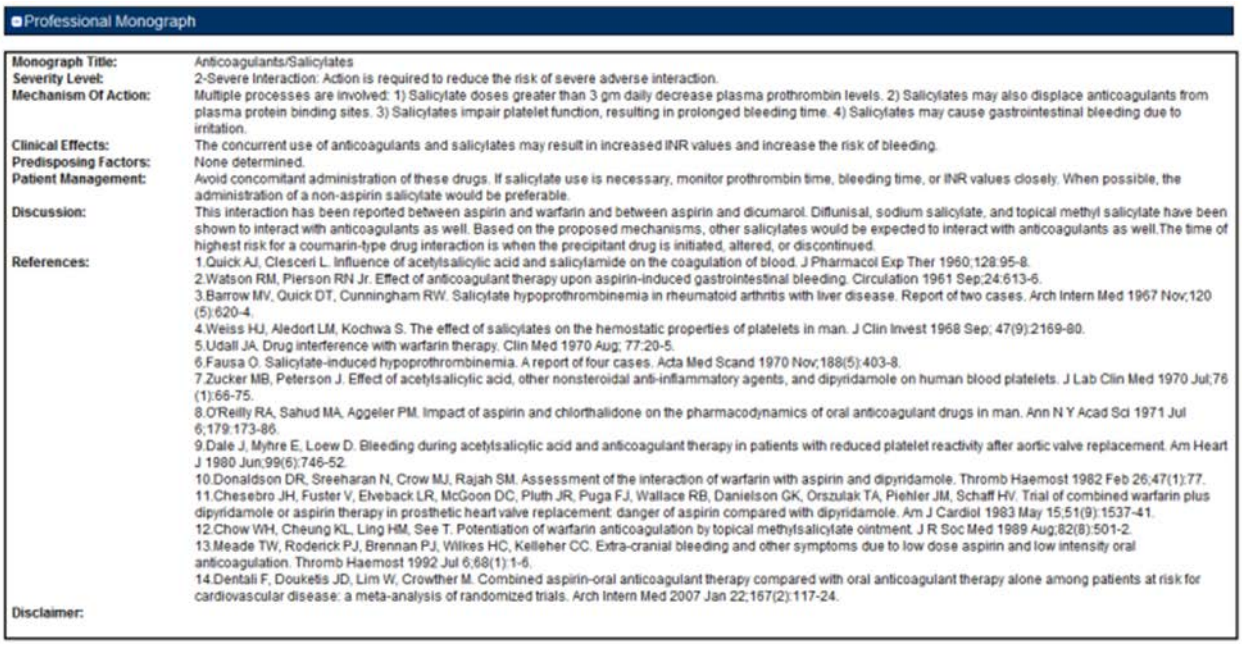
The Easy Search query Drug-Drug Interaction with Professional Monograph information will display any Drug-Drug Interactions that apply to any combination of the drugs searched. Click the Link to record in PECS link to display the record in the standard PECS application where it can undertake additional processing.

Figure 62: DDIs Shown Applicable to Drugs Checked

Professional Monograph

Any associated Professional Monographs to those Drug-Drug Interactions will be listed after the Drug-Drug Interaction information. Click the + symbol to expand the Professional Monograph (collapsed by default). If there is no Professional Monograph associated to the Drug-Drug Interaction returned by the Easy Search query, this option will not expand.

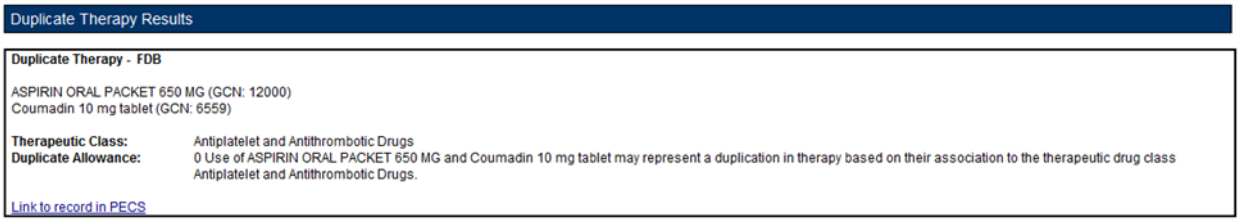
Figure 63: The Professional Monograph Associated with the DDI/PM Easy Search



Duplicate Therapy

Duplicate Therapy results the Duplicate Therapy for the drugs selected in the Drugs to Check box. The record contains the Therapeutic Drug Class that the two drugs belong to and Duplicate Allowance numerical value (0,1, 2, 3, or 4) followed by a short message stating these two drugs may represent a duplication in therapy. To view the Duplicate Therapy record in PECS, click Link to record in PECS.

Figure 64: Duplicate Therapy Easy Search Results

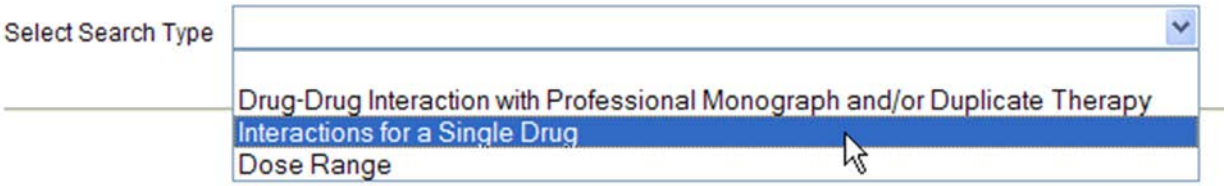


9.2 Easy Search Interactions for a Single Drug Query

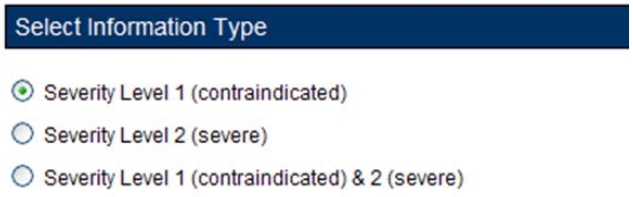
Interactions for a Single Drug allows you to generate a report for all the drug pairs that would be returned in VistA for the selected drug. The report displays FDB and Approved VA custom drug pairs with the specified severity level. FDB drug pairs will display only if there is not a corresponding Approved VA customized drug pair.

To perform an Interactions for a Single Drug Query:

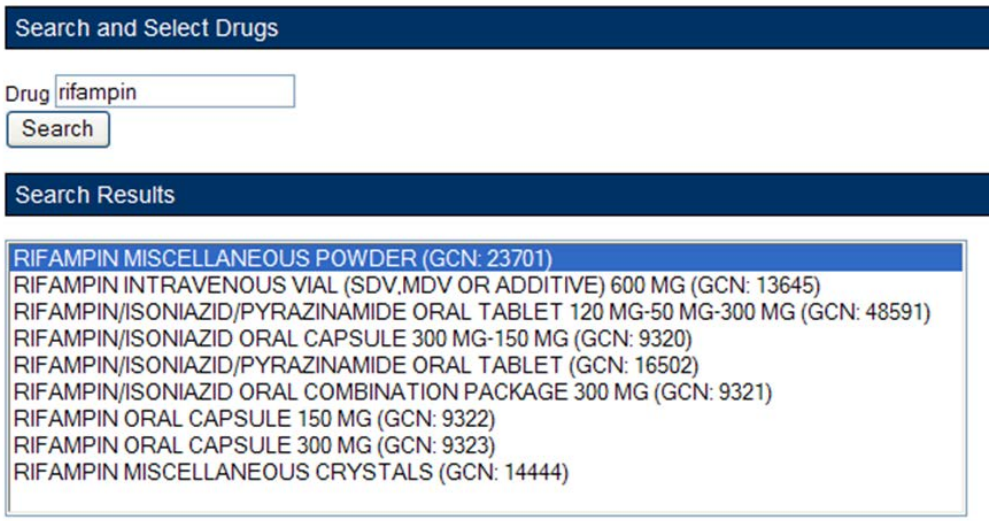
1. Select "Interactions for a Single Drug" from the Select Search Type drop-down list.



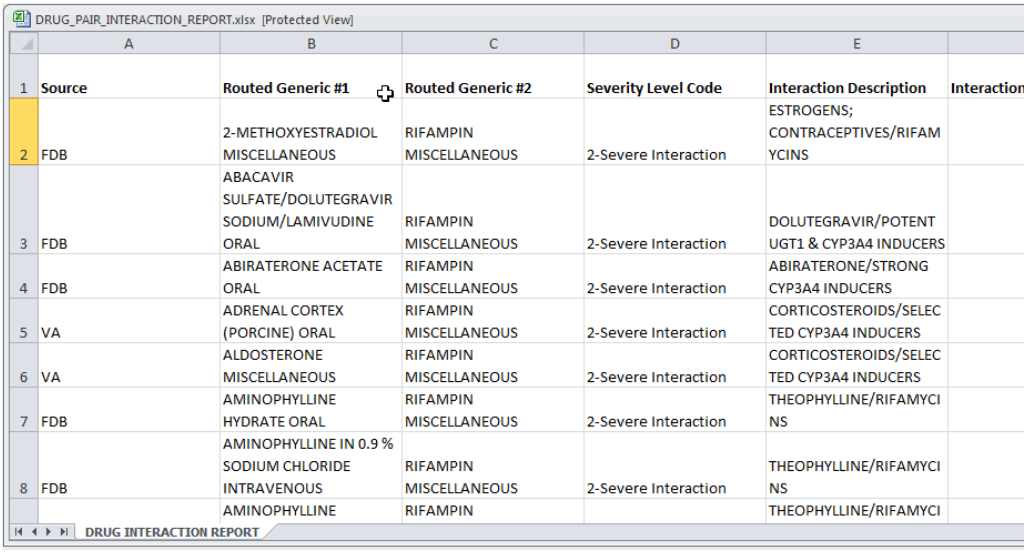
2. From the Select Information Type panel, choose the desired Severity Level with the appropriate radio button - Severity Level 1 (contraindicated), Severity Level 2 (severe), or Severity Levels 1 (contraindicated) and 2 (severe).



3. Enter a partial string or whole drug name into the Drug field and click Search. Items that match the search string are displayed in the Search Results box. The drug list displays the drug name, dose, route of delivery, and the drug's GCN sequence number. Note that if both a dispensable generic drug and dispensable drug are found that have the same GCN sequence number, only the dispensable drug are displayed on the list. Select an entry from the list.



4. Click the Generate Report button. The report generates in Excel. It contains the FDB and VA custom drug pairs whose severity level matches the selected severity level and contain a routed generic drug that corresponds to the selected generic dispensable drug or dispensable drug.


DRUG_PAIR_INTERACTION_REPORT.xlsx [Protected View]

	A	B	C	D	E	
1	Source	Routed Generic #1	Routed Generic #2	Severity Level Code	Interaction Description	Interaction
2	FDB	2-METHOXYESTRADIOL MISCELLANEOUS	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	ESTROGENS; CONTRACEPTIVES/RIFAMYCINS	
3	FDB	ABACAVIR SULFATE/DOLUTEGRAVIR SODIUM/LAMIVUDINE ORAL	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	DOLUTEGRAVIR/POTENT UGT1 & CYP3A4 INDUCERS	
4	FDB	ABIRATERONE ACETATE ORAL	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	ABIRATERONE/STRONG CYP3A4 INDUCERS	
5	VA	ADRENAL CORTEX (PORCINE) ORAL	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	CORTICOSTEROIDS/SELECTED CYP3A4 INDUCERS	
6	VA	ALDOSTERONE MISCELLANEOUS	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	CORTICOSTEROIDS/SELECTED CYP3A4 INDUCERS	
7	FDB	AMINOPHYLLINE HYDRATE ORAL	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	THEOPHYLLINE/RIFAMYCINS	
8	FDB	AMINOPHYLLINE IN 0.9 % SODIUM CHLORIDE INTRAVENOUS	RIFAMPIN MISCELLANEOUS	2-Severe Interaction	THEOPHYLLINE/RIFAMYCINS	
		AMINOPHYLLINE	RIFAMPIN		THEOPHYLLINE/RIFAMYCI	

DRUG INTERACTION REPORT

Interactions for a Single Drug Report Details

Table 11: Interactions for a Single Drug Report Fields

Field	Description
Source	Source of the record; either VA or FDB
Routed Generic #1	A generic drug name, e.g. "Rifampin Oral"
Routed Generic #2	A generic drug name, e.g. "Rifampin Oral"
Severity Level Code	The severity of the interaction.
Interaction Description	A brief description of the interaction.
Interaction ID	A numerical identifier assigned to the interaction.

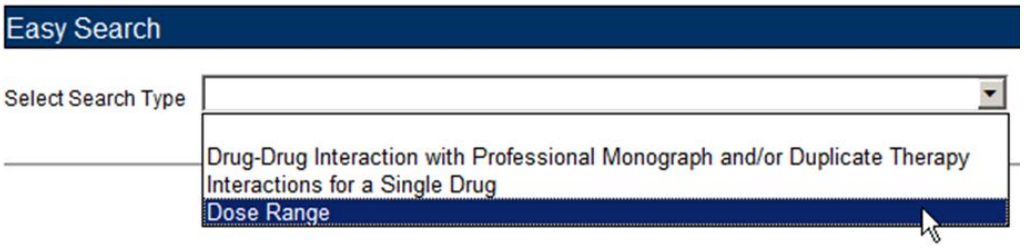
Field	Description
Corresponding FDB Interaction ID	VA records only: the interaction as described by First Databank. If there is no corresponding interaction, this field will contain '0'.
Action Date	The date and time of the most recent update to the record.

9.3 Easy Search Dose Range Query

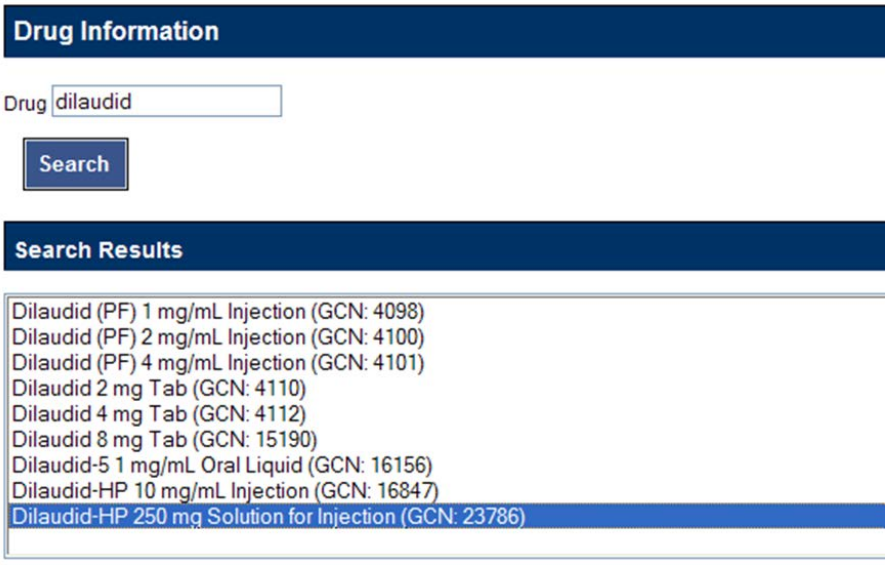
The Dose Range query allows you to easily the appropriate dosage information for a specific drug based on the patient and dose particulars entered for a selected drug. The results of this query allow the user to ensure the amount being prescribed is an acceptable amount. An Easy Search Dose Range query allows you to find the acceptable dose range for a drug quickly and easily, and presents the results in an easy to understand format.

To perform an Easy Search Dose Range query:

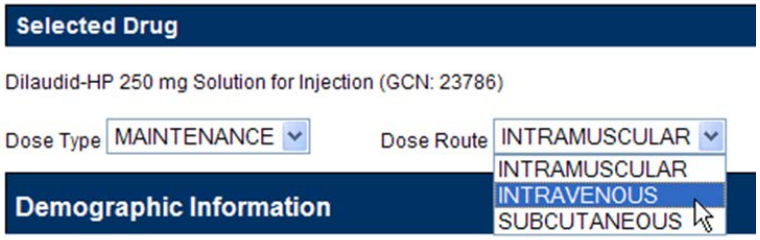
1. From the Select Search Type drop-down list on the Easy Search page, select 'Dose Range.'



2. Enter a partial string or whole drug name into the 'Drug' field. Note that you can enter multiple partial strings, and the system returns drugs that match on both strings -- the order of the strings and case are ignored.
3. Click the Search button. The system returns all drugs, that is, both routed generic drugs and dispensable drugs that contain the partial string/whole drug name entered.
4. Select the appropriate drug from the Search Results list. Note that if the drug does not have a defined dose route and/or a defined dose unit, the query cannot be performed and an error message is displayed.



5. In the Selected Drug section, select the Dose Type and Dose Route. The available selections will be limited to those appropriate for the selected drug; in some cases, the default values may be the only options available.

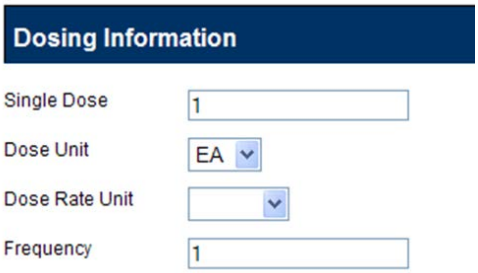


6. The Demographic Information section will automatically be populated with standard values. If more appropriate patient information is available, the default values can be replaced. Factors included are:

   - Age (years)
   - Weight (kg or lbs.)
   - Height (cm or in)

   In the Dosing Information section, enter information about the proposed dose. Factors include:

   - Single Dose
   - Dose Unit
   - Dose Rate Unit
   - Frequency

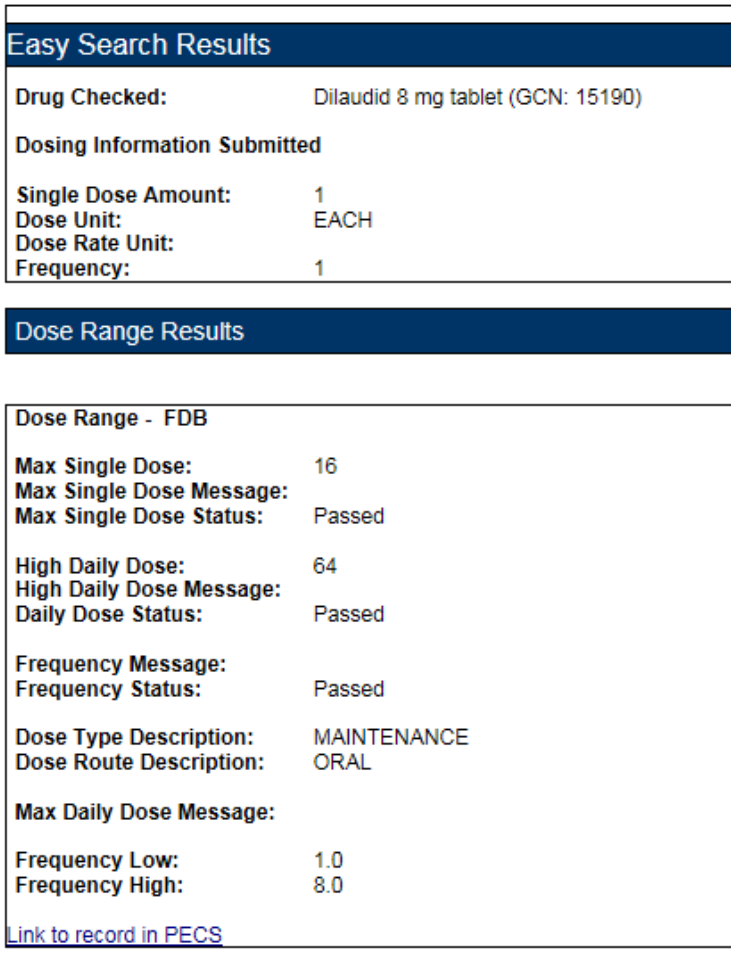


Dose Range Query Results

If available, the Dose Range Results section displays the appropriate dose range for the selected drug. You can also view the Dose Range record in PECS by clicking Link to record in PECS.

Note:	Due to a limitation in the FDB database, not all PECS Dose Range records can be linked directly from Easy Search Results. If the record cannot be linked, "Link to record in PECS Not Available" will appear at the bottom of Dose Range Results. Use Advanced Query/Customization to find and view the record in PECS.

Figure 65: Results for a Dose Range Easy Search



Drug Information

The Easy Search Results section displays the information you entered in the query.

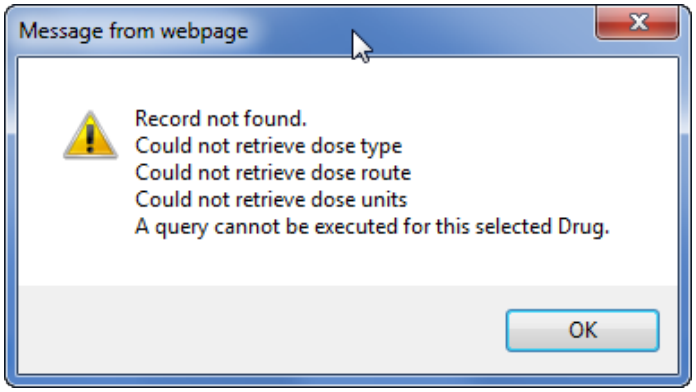
- Drug Checked
- Drug Information Submitted
    - Single Dose Amount
    - Dose Unit
    - Dose Rate Unit
    - Frequency

Dose Range Information

The Dose Range Results section displays (if available) the appropriate dose range for the selected drug.

- Max Single Dose
- Max Single Dose Message
- Max Single Dose Status
- High Daily Dose
- High Daily Dose Message
- Daily Dose Status
- Frequency Message
- Frequency Status
- Dose Type Description
- Dose Route Description
- Max Daily Dose Message
- Frequency Low
- Frequency High

Note: When PECS can't retrieve the selected dose type, dose unit, and dose route for a drug, it displays a message in a popup:



9.4 Potential Easy Search Result and PECS Record Discrepancy

The custom detail pages in PECS show the custom record as it exists in PECS. These detail pages are accessed through either the Advanced Query/Customization tab, or by clicking the "Link to record in PECS" link found on the Easy Search Results screens.

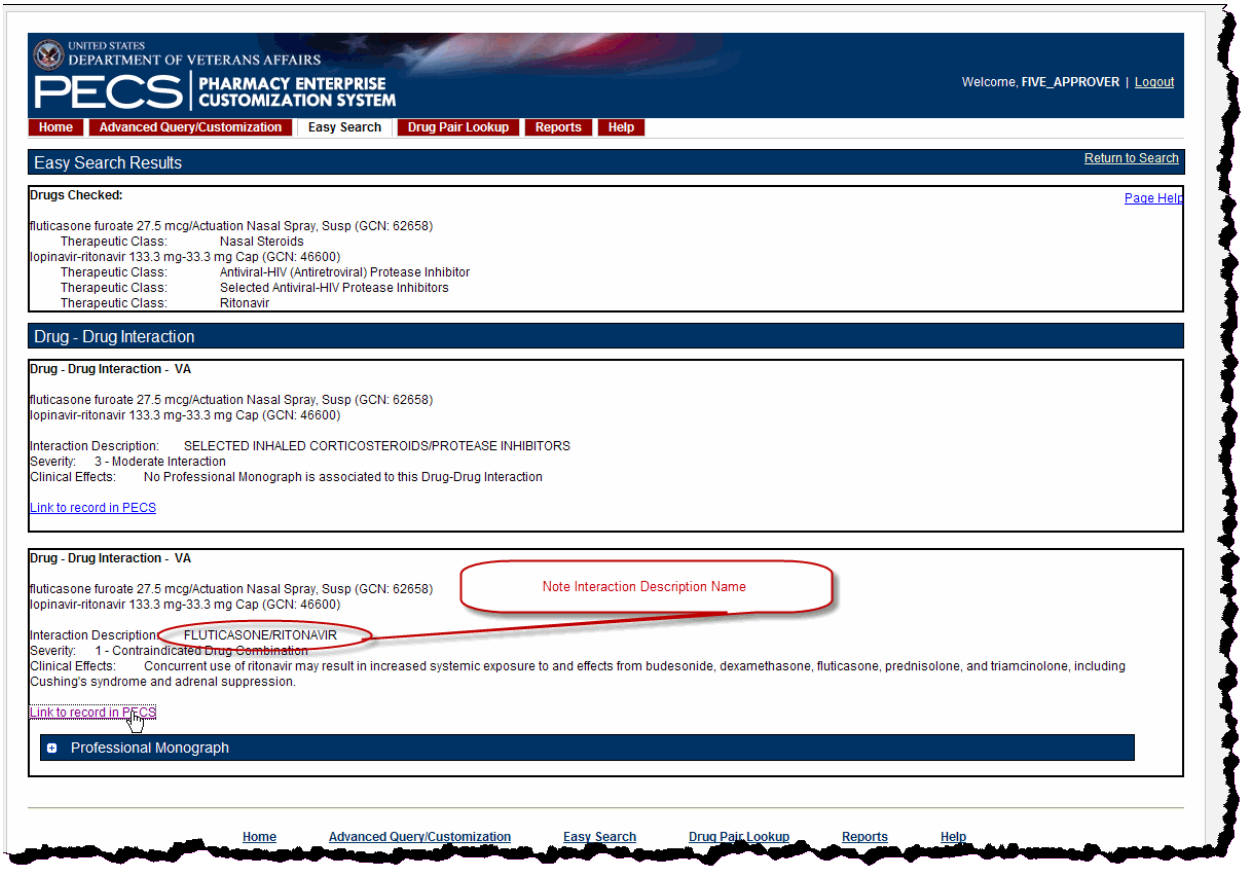
When you use Easy Search to look up Drug-Drug Interactions or Duplicate Therapy, Easy Search uses a different database table than the one used to store the actual PECS record. The Easy Search results page shows only data from custom records in an Approved state that have been exported in a custom update and processed by an external process named DATUP. If a custom record has not gone through this process, you will see the FDB record and there will be a discrepancy.

Also, if a previously approved/exported custom record is updated, Easy Search will not show the updated data in the results page until the record is approved, exported, and processed by DATUP. Instead, Easy Search will show the custom record results that were last uploaded to DATUP.

Below are examples of discrepancies. Remember that these discrepancies cannot be duplicated and re-displayed after a custom update has been approved and run through DATUP, so do not try to re-create them. They are for informational purposes only, and even show an older screen capture of PECS (no Contact Us tab).

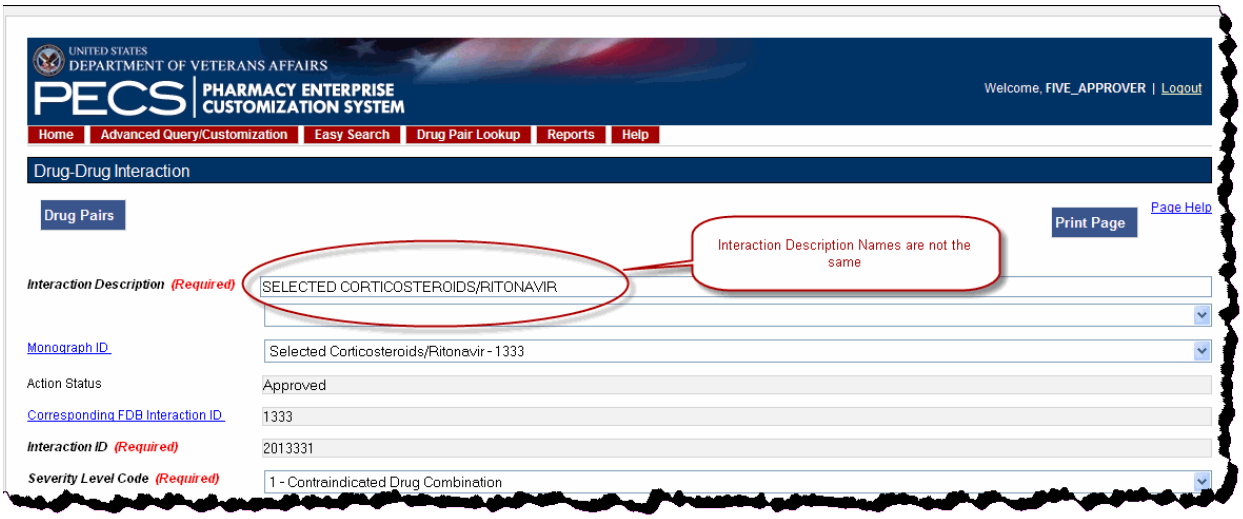
Example #1, from Easy Search:

Figure 66: Easy Search DDI Record



Example #2, shown by clicking the “Link to record in PECS” link as is shown above. This discrepancy means the custom record has not been approved and/or not processed through DATUP. This potential discrepancy applies to Drug-Drug Interaction, Professional Monograph, Duplicate Therapy, and Dose Range concepts.

Figure 67: Referenced PECS Record with Name Discrepancy



10 Drug Pair Lookup

A Drug Pair is a combination of drugs known to cause a drug interaction. A drug interaction is a situation in which a substance (usually another drug) affects the activity of a drug when both are administered together. Drug Pair Lookup provides a quick and easy way to search both the FDB and VA databases for these drug pairs.

When performing a Drug Pair Lookup query, enter query criteria in any or all of the four entry fields. The results are displayed under the VA Table Results and FDB Table Results panels. These consist of active customized Drug Pair records from the VA custom database that are available for modification, as well as their related Drug Pair records from the FDB database from which they were customized.

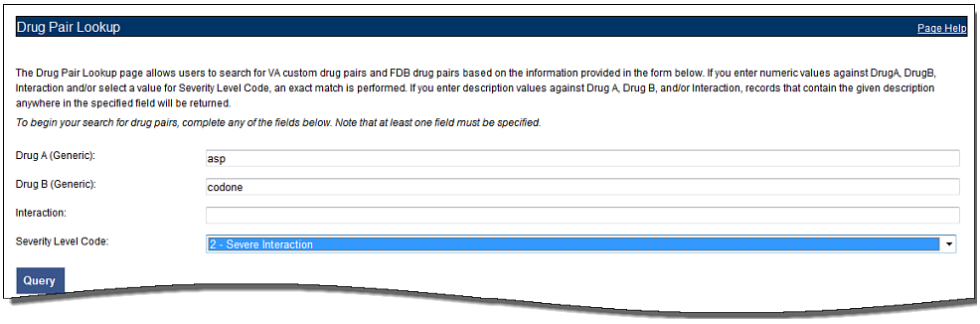
Field names are as follows:

- Drug A (Generic) - The name (or partial name) of one generic drug associated with an interaction.
- Drug B (Generic) - The name (or partial name) of a second generic drug associated with an interaction.
- Interaction - An assigned drug interaction number and description associated with the drug pair. This can be entered in conjunction with the Drug A and Drug B entries or can be used on its own. Enter either *all* of the Interaction ID, or all or part of the interaction description.
- Severity Level Code - A drop-down list of available severity codes that are allowed for an interaction. This can be used on its own, but is most useful to limit the results produced by the other criteria.

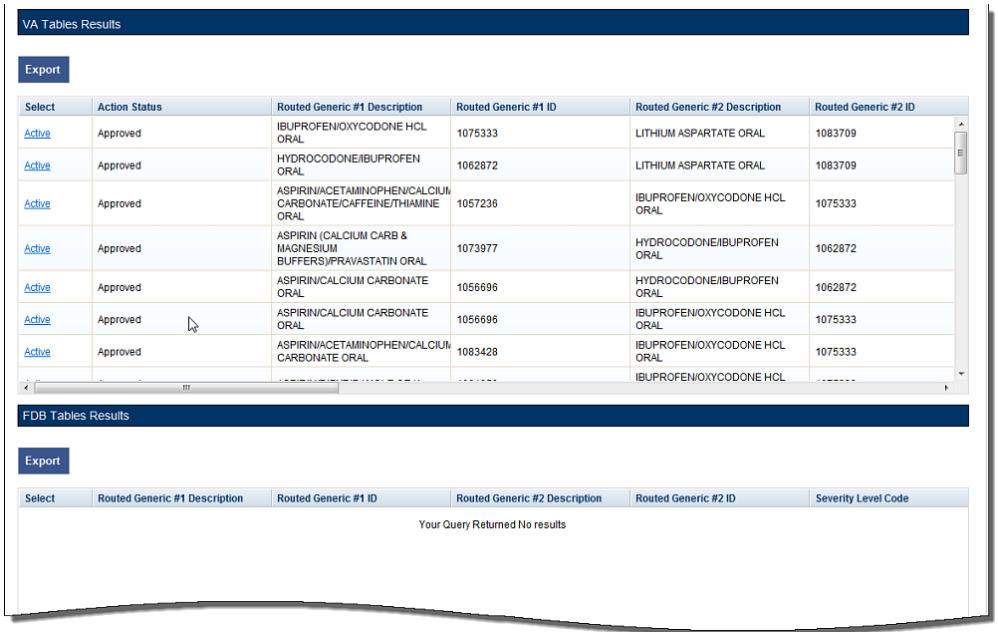
10.1 Performing a Drug Pair Lookup Query

To perform a Drug Pair Lookup query:

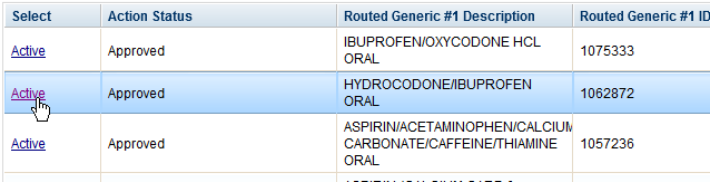
1. Fill the query form with your search criteria; greater detail will yield more relevant results.



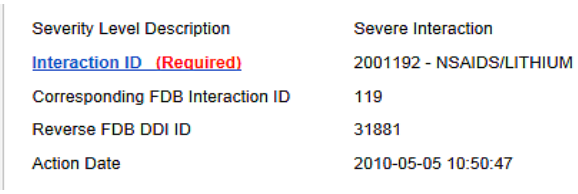
2. Click Query.
3. Drug Pairs matching the query criteria (both VA and FDB) will display in their respective panels. If the results are unsatisfactory, you can adjust the query criteria and click Query again.



4. Click the link in the Select column to view the drug pair record. VA records will display and Active link; FDB records display an Open link.



5. To further customize the record, click the Interaction ID link to display the Drug-Drug Interaction (and the associated Drug Pairs).



10.2 Export Query Results

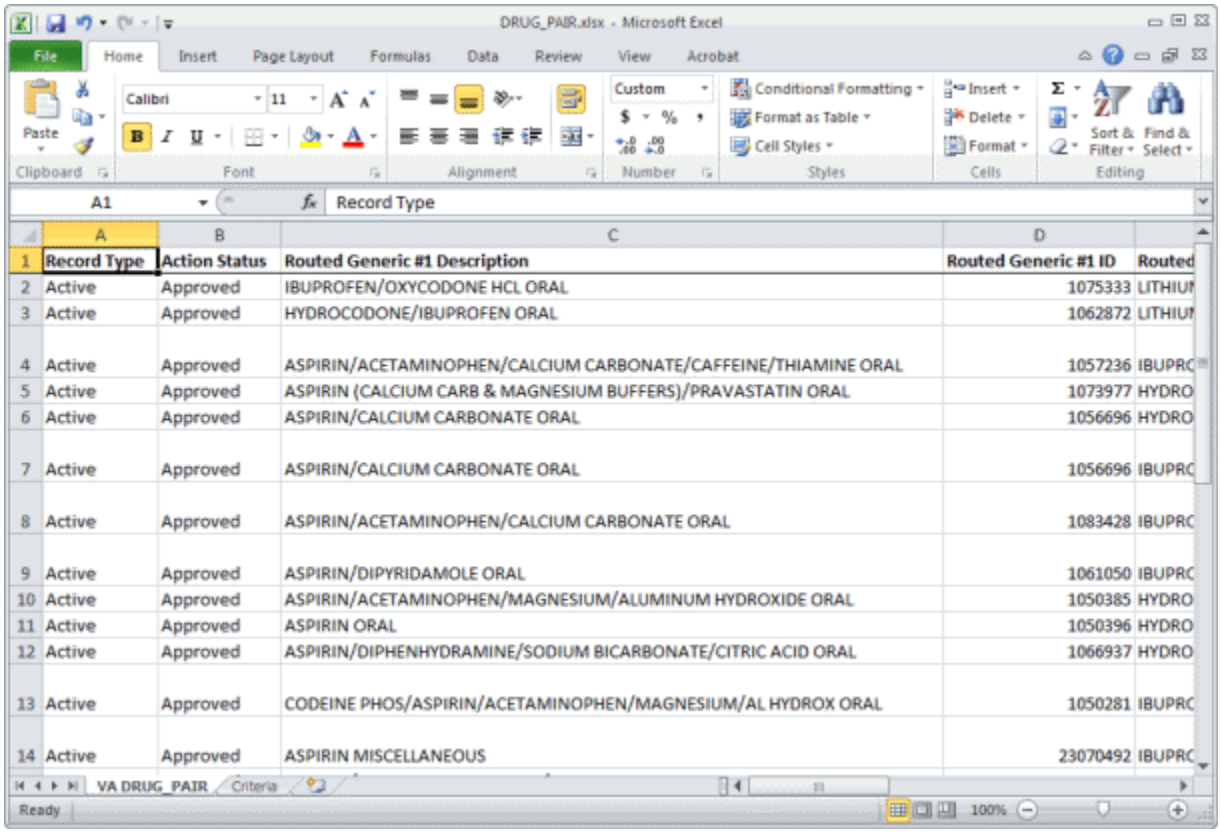
You can export the results of a Drug Pair Lookup query to an Excel spreadsheet.

1. Perform a Drug Pair Lookup Query.
2. Click the Export button associated with the Results list. The Export option is available for both VA and FDB results.

3. Click Open to display the Drug Pair Report; click Save to save a copy of the report to your system.

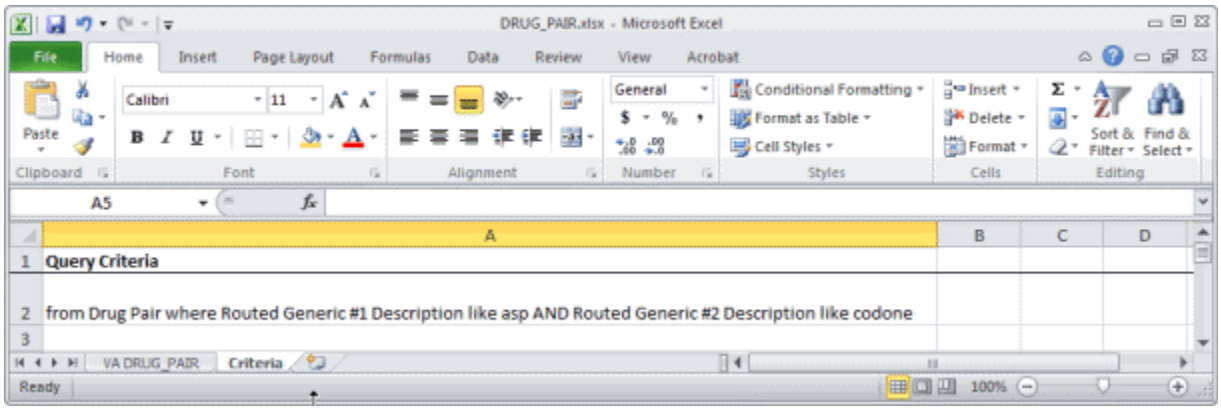
The spreadsheet contains two tabs:

a) The Drug Pair tab (either VA or FDB) displays the results of the query.



	A	B	C	D	
1	Record Type	Action Status	Routed Generic #1 Description	Routed Generic #1 ID	Routed
2	Active	Approved	IBUPROFEN/OXYCODONE HCL ORAL	1075333	LITHIUM
3	Active	Approved	HYDROCODONE/IBUPROFEN ORAL	1062872	LITHIUM
4	Active	Approved	ASPIRIN/ACETAMINOPHEN/CALCIUM CARBONATE/CAFFEINE/THIAMINE ORAL	1057236	IBUPRO
5	Active	Approved	ASPIRIN (CALCIUM CARB & MAGNESIUM BUFFERS)/PRAVASTATIN ORAL	1073977	HYDRO
6	Active	Approved	ASPIRIN/CALCIUM CARBONATE ORAL	1056696	HYDRO
7	Active	Approved	ASPIRIN/CALCIUM CARBONATE ORAL	1056696	IBUPRO
8	Active	Approved	ASPIRIN/ACETAMINOPHEN/CALCIUM CARBONATE ORAL	1083428	IBUPRO
9	Active	Approved	ASPIRIN/DIPYRIDAMOLE ORAL	1061050	IBUPRO
10	Active	Approved	ASPIRIN/ACETAMINOPHEN/MAGNESIUM/ALUMINUM HYDROXIDE ORAL	1050385	HYDRO
11	Active	Approved	ASPIRIN ORAL	1050396	HYDRO
12	Active	Approved	ASPIRIN/DIPHENHYDRAMINE/SODIUM BICARBONATE/CITRIC ACID ORAL	1066937	HYDRO
13	Active	Approved	CODEINE PHOS/ASPIRIN/ACETAMINOPHEN/MAGNESIUM/AL HYDROX ORAL	1050281	IBUPRO
14	Active	Approved	ASPIRIN MISCELLANEOUS	23070492	IBUPRO

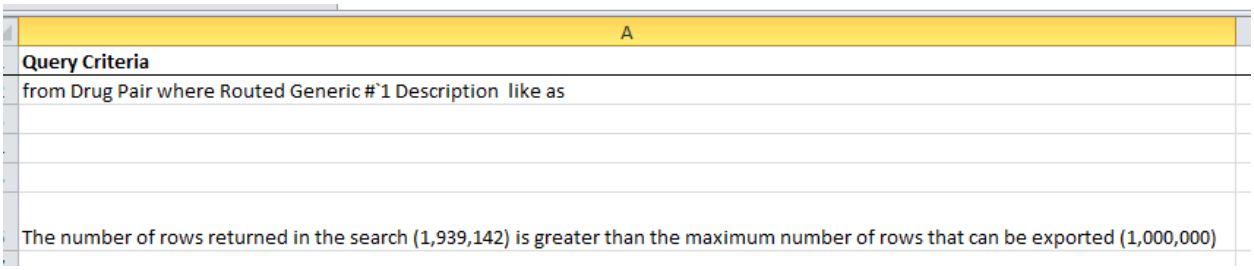
b) The Criteria tab displays the criteria used in the query.



Export Query Line Limit

There is a 1,000,000 line limit for exporting to the spreadsheet. If your query returned more than 1,000,000 records and you submitted the records for export anyway, the Criteria tab on the report gives you the following message: “The number of rows returned in the search (XXXXXX) is greater than the maximum number of rows that can be exported (1,000,000).”

Figure 68: Export Query Line Limit Message



11 Detail Pages

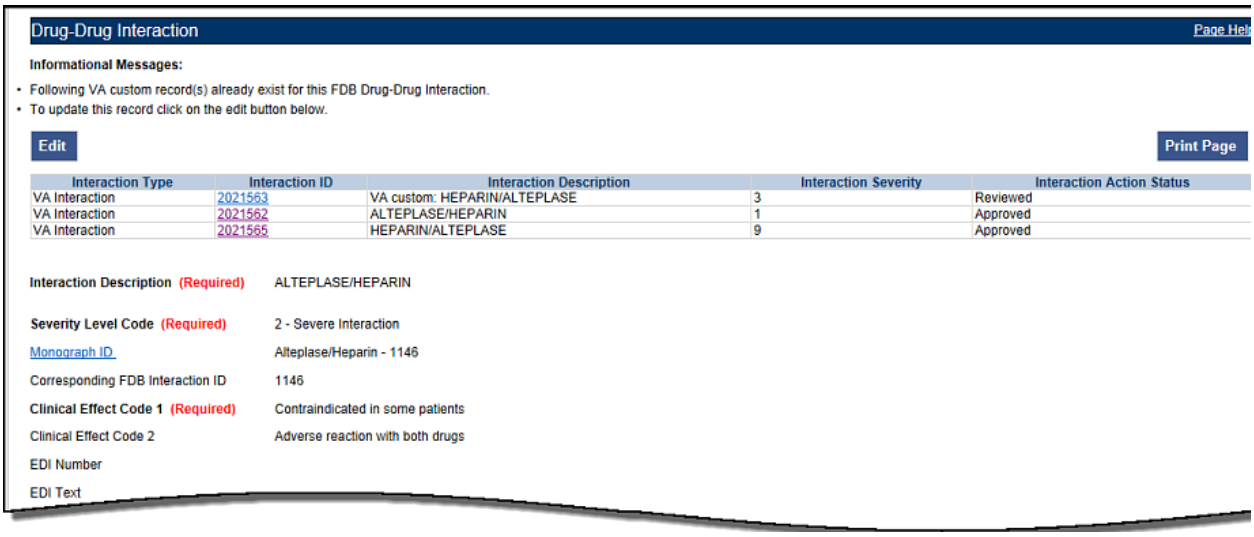
Detail Pages are the display mechanism for PECS records. The display the information contained in the record and, in the case of FDB records, provide a means to customize that record. There are detail pages for each of the five concepts (Drug-Drug Interaction, Drug Pairs, Professional Monograph, Duplicate Therapy, and Dose Range.

11.1 Detail Page Overview

Detail Pages display the details of the record appropriate to the concept being viewed for both FDB and VA records. The sections below are taken from a Drug-Drug Interaction records, but the detail page behaviors are consistent among the different Concepts.

FDB Records

Figure 69: FDB DDI Record

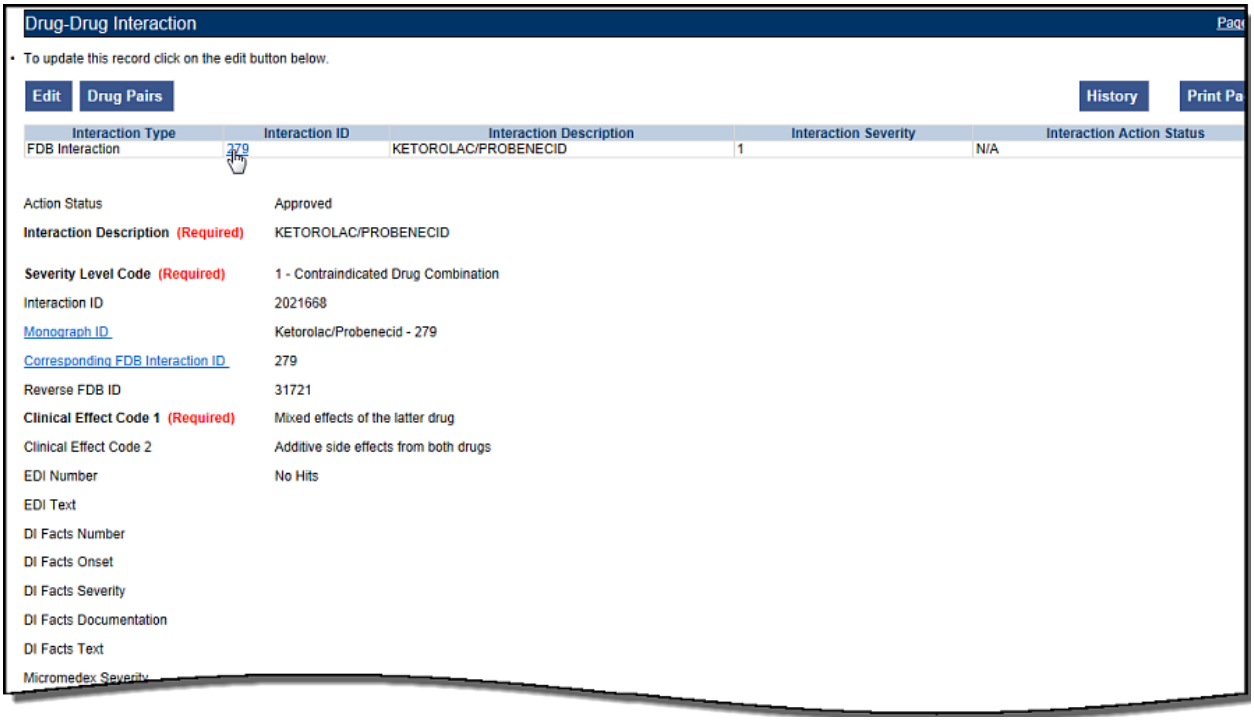


With FDB records, you can:

- View Record Details
- Customize the FDB Record
- View Associated Record Links

VA Records

Figure 70: VA Custom DDI



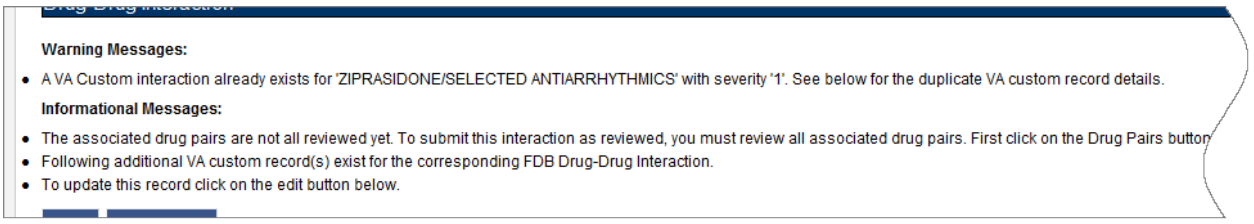
With VA records, you can:

- View Record Details
- Edit a Record
- Print a Record
- Add Pre-Customization Comments
- View Associated Record Links
- View History Report
- View Field-Level History
- View Export Date

11.1.1 Informational and Warning Messages

Some records have informational and warning messages associated with them. These messages provide information about the record itself and not necessarily the contents of the record.

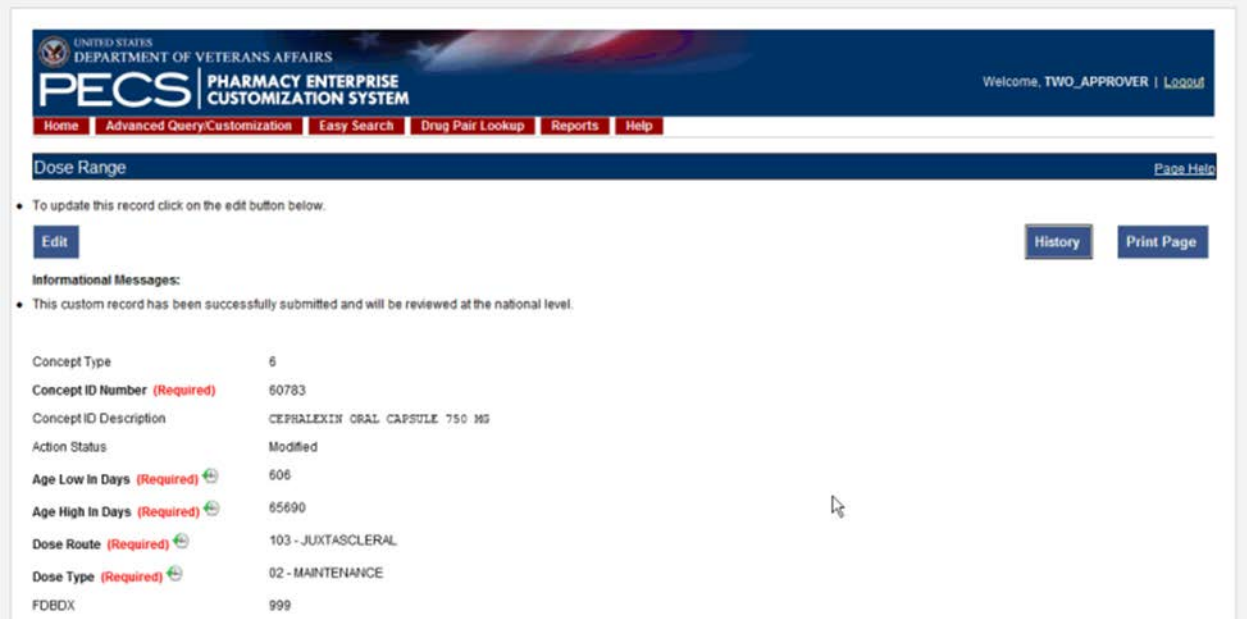
Figure 71: Informational and Warning Messages



11.2 Using Detail Pages

Detail pages provide information about the PECS records. The information on the page is slightly different for each concept, but the basic functions are the same.

Figure 72: Example of a Detail Page



11.2.1 Viewing Record Details

The Home Page for Requestors and Approvers contains links to pre-defined queries that facilitate viewing records. Requestors can use these links to view details of records that they have created.

Approvers can use the links to view details of records they created, records currently assigned to them for some action, unassigned records, and All records.

All users can use Advanced Query/Customization to find and view record details.

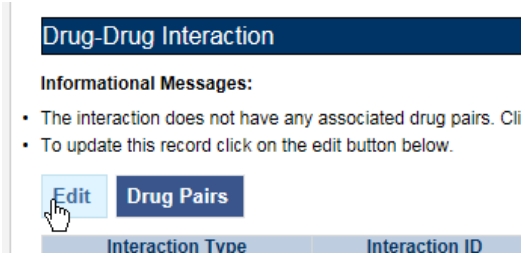
11.2.2 Edit a Record

Editing a record is different depending on the type of record it is, and the current state of that record. For example, if viewing an FDB record, editing it produces a customization. If viewing a VA record, editing could mean:

- Changing the record details (modify)
- Reviewing an existing record as part of the approval process
- Approving an existing record
- Rejecting an existing record
- Deleting an existing record

In all cases, click Edit to begin the modification process. See Working with Customization Requests for additional information on the modifications you can perform on a record.

Figure 73: Use the Edit button to Modify Record Details



Only Requestor and Approvers can modify a record. Requestors can only modify FDB records (customize) or VA records they have created. Approvers can also modify/customize FDB records and can also modify most VA records with the following exception: they cannot Review a record they created. See Working with Customization Requests for additional information.

NOTE	**If you are a Release Manager or Administrator but have not yet been assigned that role by a PECS Administrator, you will have Requestor privileges until your appropriate role is assigned.**

In some cases, PECS will display the Edit button and allow you to view the record in Edit mode. However, any changes you make to the record cannot be saved; use Cancel Edit to return to the detail page in read-only mode.

11.2.3 Print a Record

The Print Page button calls the browser Print function, allowing you to print the page to any printer you have connected to your system.

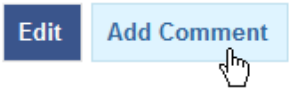
11.2.4 Add Pre-Customization Comments

Approver users can add comments to FDB records that do not have customized VA versions. The comments are visible on the FDB record and contain the text of the comment as well as the date and time it was entered and the PECS User ID of the person who entered it. Once entered, these comments cannot be edited or deleted.

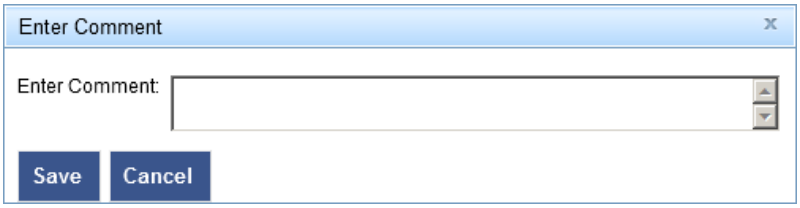
If the FDB record is customized, the pre-customization comments will become part of the customized record. Once customized, you cannot add additional pre-customization comments to an FDB record.

To add a pre-customization comment:

1. Click the Add Comment button:



2. Enter the comment in the Enter Comments dialog box:



3. Click Save to save your changes; click Cancel to abandon the enter comments process and return to the record. The comments appear in the Pre-Customization Comment History of the record.

Pre-Customization Comment History

```
2013/06/10 09:47:13 [redacted]: This interaction
has been reviewed the NDF Support Group. After
thorough review of drug interaction references,
PBM documents and the medical literature it was
determined that the interaction does not have
sufficient evidence to be customized to a
different level at this time.
```

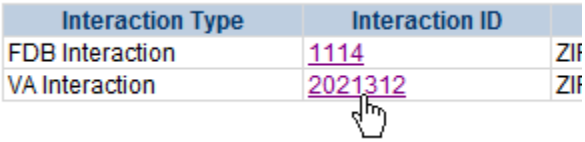
11.2.5 View Associated Record Links

If an FDB record has been customized, links to the VA-customized records are provided.

Figure 74: VA Custom Record ID Links

VA records provide links to the original FDB record as well as any additional customizations created from the original FDB record.

Figure 75: VA Custom and FDB Record Links

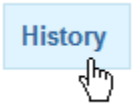


11.2.6 History Report

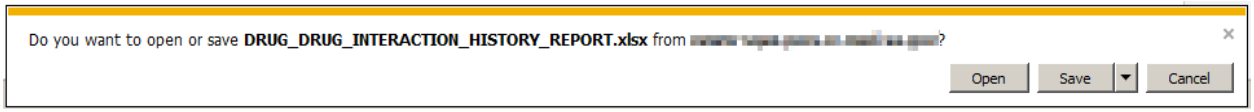
History Reports detail all the changes made to the current record. Changes to most editable fields will appear in the report as red text with an asterisk (*). Changes to the Current Action Reason are not highlighted (red) in the History Report. It is presented as a Microsoft Excel spreadsheet.

To display a History Report:

1. From the Detail page, click the History button.



2. Click Open to display the History Report; click Save to save a copy of the report to your system:



3. If you chose to Open the report, it will be displayed. If you chose Save, the report can be opened at any time using Excel.

	A	B	C	D	E	
1	Action Status	Interaction Description	Interaction ID	Monograph ID	Severity Level Code	Clinical Eff
2	New	ZIPRASIDONE/SELECTED ANTIARRHYTHMICS	2021312	1114	9 - Undetermined Severity - Alternative Therapy Interaction *	MAR
3		ZIPRASIDONE/SELECTED ANTIARRHYTHMICS	1114	1114	1 - Contraindicated Drug Combination	MAR
4						

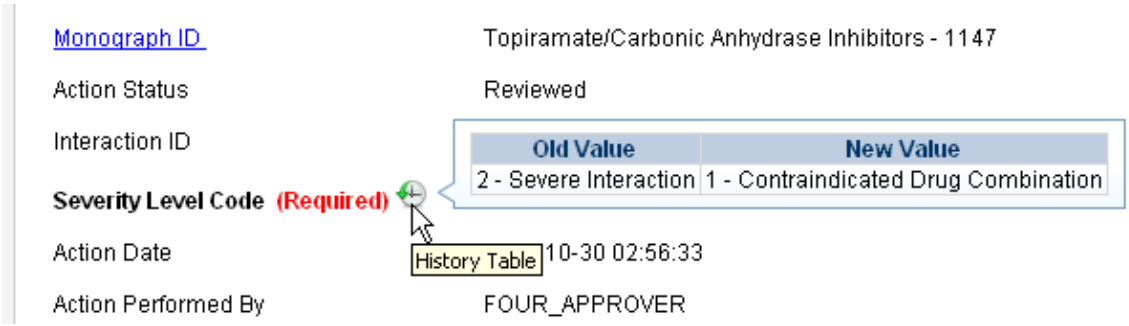
HISTORY_REPORT

11.2.7 Field-Level History Table

You can review a list of changes to an individual field by hovering over the History Table icon next to a field that has been changed. Field-level history is retained only while the record is in its current state. The field-level history is reset when the state changes to Approved or Deleted (Modified or Reviewed doesn't cause a reset). Field-level history is only displayed for Required Fields with the exception of Current Action Reason; field-level history is not retained for Current Action Reason, but it can be viewed on the History Report along with changes to non-required fields.

Figure 76: At-a-Glance History Icon

Figure 77: On-Screen History Table from Icon



11.2.8 Export Date

The Export Date field appears on the VA Custom Detail Pages and in the Customization Reports. It contains the date and time an Approved or Deleted record was included in the Incremental Update File, so it is only populated on records with Action Status' equal to Approved or Deleted.

Note:	If an Incremental Update File has not been created since the record Action Status was change to Approved or Deleted, the Export Date will be blank until the next Incremental File is created.

Sometimes an Approved or Deleted record included on an Incremental Update File needs to be changed. Any change to that record will cause the Export Date field to be cleared (blank) in the active record. The only way to determine that the record has been exported is to view the History report or search for the record using Advanced Query/Customization and select Include Historical Records.

If the change to the record causes a change to the Action Status, and that modification is later Rejected, the following happens:

If a “Modified after Approved” (displays as Modified in PECS) record is Rejected:

> The Action Status “rolls back” to Approved, and the record will be included in the next Incremental Update File and the Export Date will be updated.

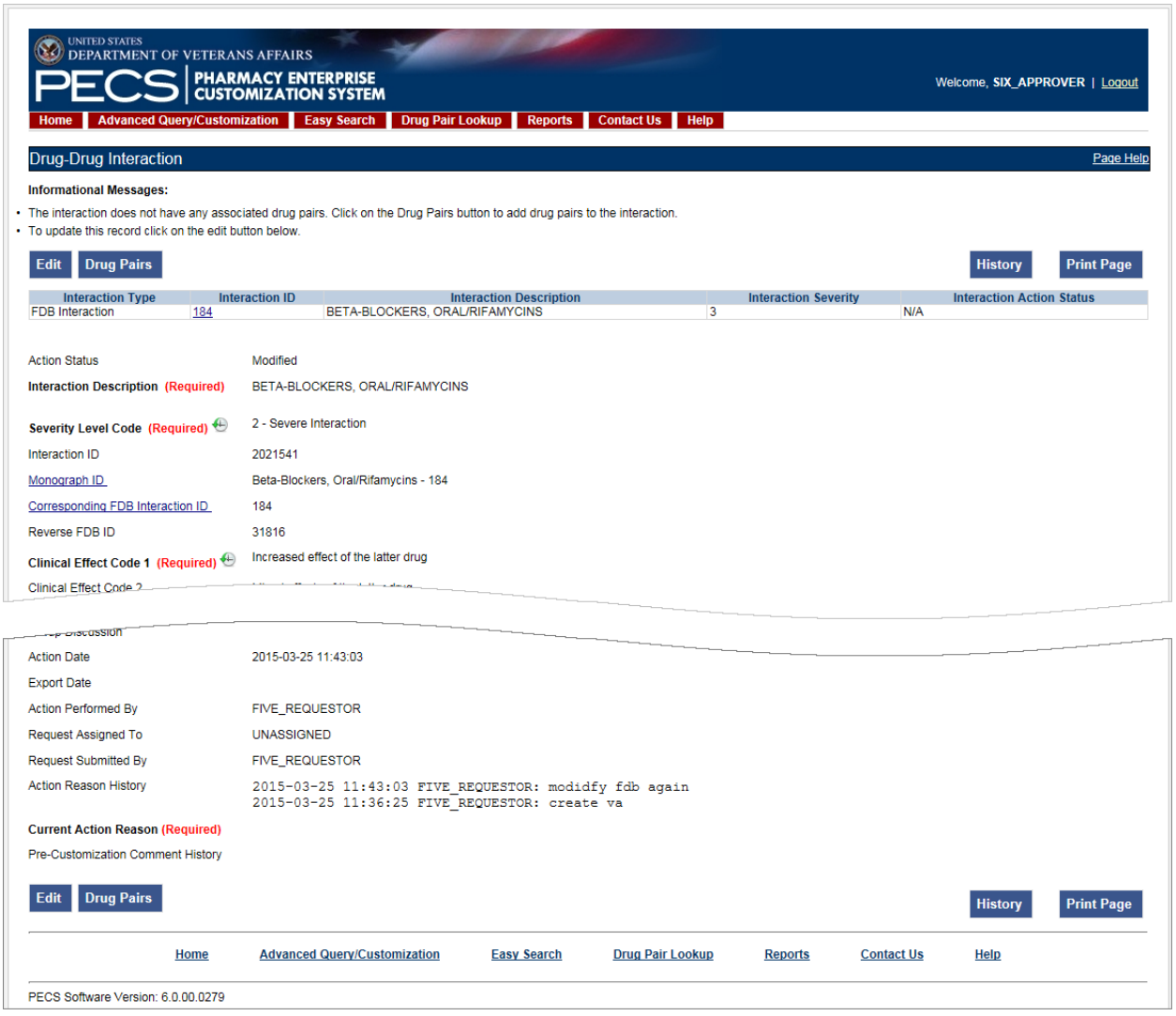
If a “Modified after Delete” (displays as Modified in PECS) record is Rejected:

> The Action Status “rolls back” to Deleted. However, records that roll back to a Deleted Action Status are NOT included in the next Incremental Update File, so the Export Date will NOT be updated and will remain blank on the active record.

11.3 Drug-Drug Interaction Detail

The Drug-Drug Interaction Detail page allows users to view the details of both FDB and VA Drug-Drug Interaction records. FDB Drug-Drug Interactions can be customized to become VA Drug-Drug Interactions. See Working with Customization Requests for additional information on creating a VA customization request.

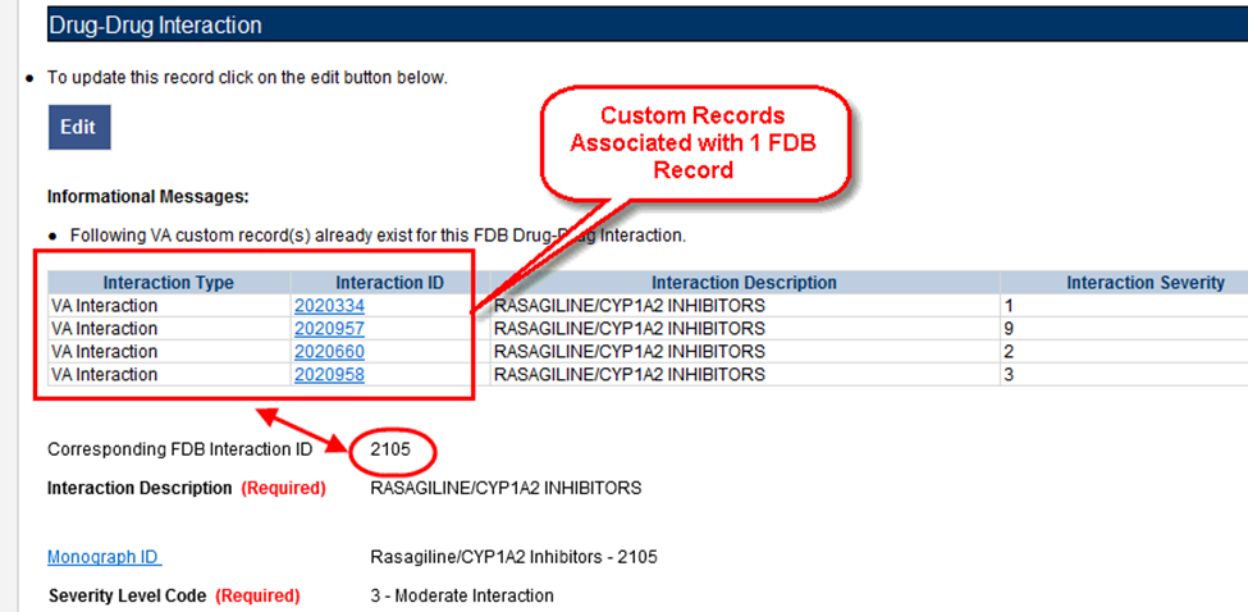
Figure 78: Detail Page of VA Customized DDI, Top and Bottom



11.3.1 Multiple VA Customizations for One FDB Record

You can create multiple VA Custom Drug-Drug Interactions (DDIs) from one corresponding FDB Record. If you open an FDB DDI record on the Advanced Query/Customization page, the DDI Detail page will open. If there are any VA custom records for this FDB DDI, you'll see a message stating that "The following VA custom record(s) already exist for this FDB Drug-Drug Interaction," and a table and a link to any interactions displays. See Figure 78.

Figure 79: Multiple VA Custom DDIs to One FDB Record



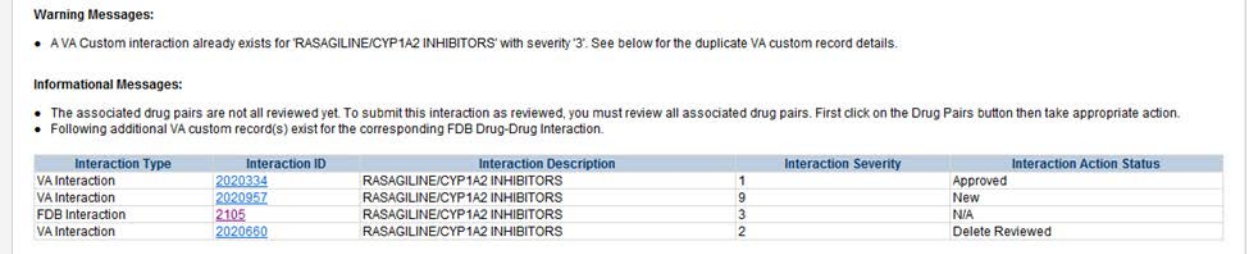
From here, you can create another custom record if you wish. Checks exist in the system so that the same user cannot make duplicate DDIs or another user cannot come in and make the same DDI that another user just made.

11.3.2 Create Multiple Customizations from One FDB Record

Drug-Drug Interactions and Dose Range records can be customized multiple times from a single FDB record.

To create multiple customizations from one FDB record:

1. Find and display the FDB record you want to customize using Advanced Query/Customization.
2. Click Edit.
3. Create the custom record by changing something and clicking Customize.
4. Your new record is created. The record ID is displayed on the Interaction ID field. If you have any duplicates or other discrepancies, you will see a warning message (such as an identical interaction severity):



5. Repeat the process using the same FDB record as many times as necessary.

11.3.3 Cannot Add Identical Drug Pairs to Same DDI

After you have created a new DDI or added new drug pairs to an existing DDI, a second user can come in and attempt to add the same drug pairs. One cannot add a drug pair that currently exists for the selected DDI:

Figure 80: Error for Duplicate Drug Pairs for One DDI

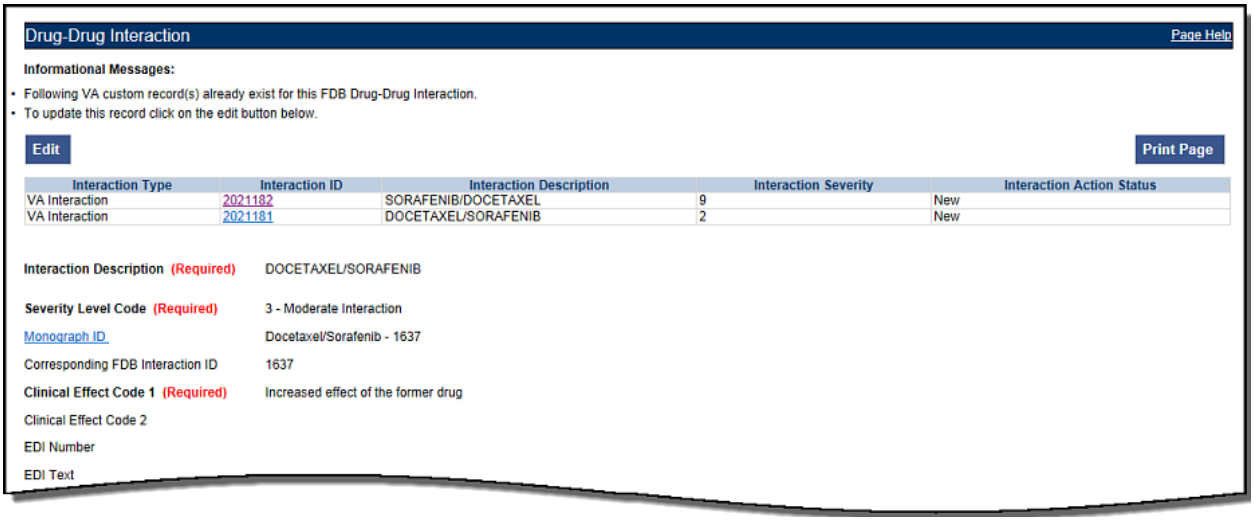
You will also receive an error if you attempt to customize a drug pair for a DDI in Reverse Order:

Figure 81: Error for Duplicate Drug Pairs in Reverse Order for One DDI

11.3.4 Reverse Drug-Drug Interactions

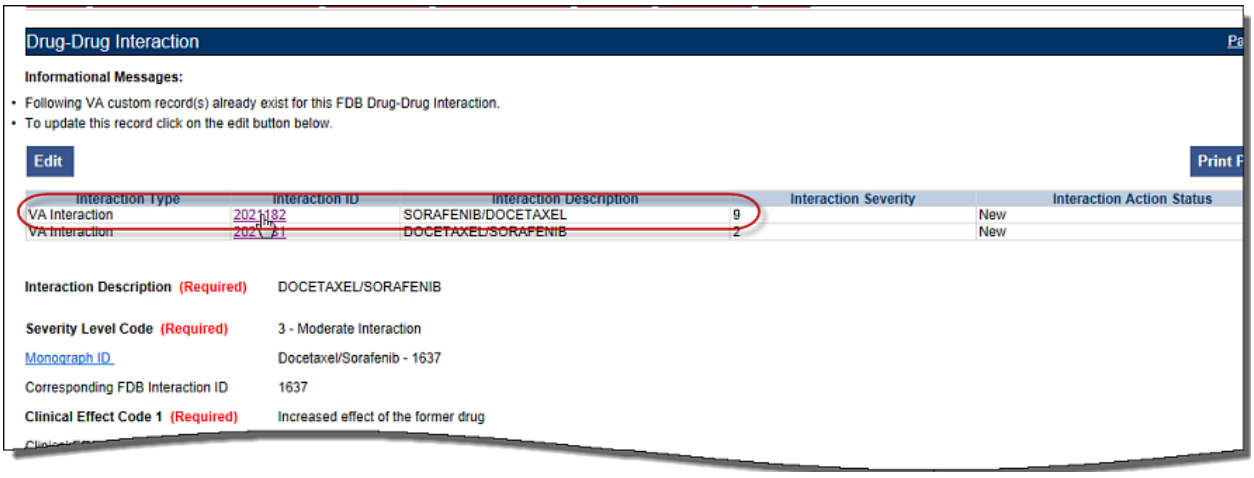
Multiple Drug-Drug Interaction records may exist for the same drugs listed in reverse order. For example, FDB Interaction ID 1234 is Drug A/Drug B and FDB Interaction ID 30766 is Drug B/Drug A. Information about reverse DDIs is displayed in the table at the top of the detail page. The screen shot below displays FDB record 1637, which has a DDI customization and a reverse DDI customization.

Figure 82: FDB DDI with a Customization and a Reverse Customization



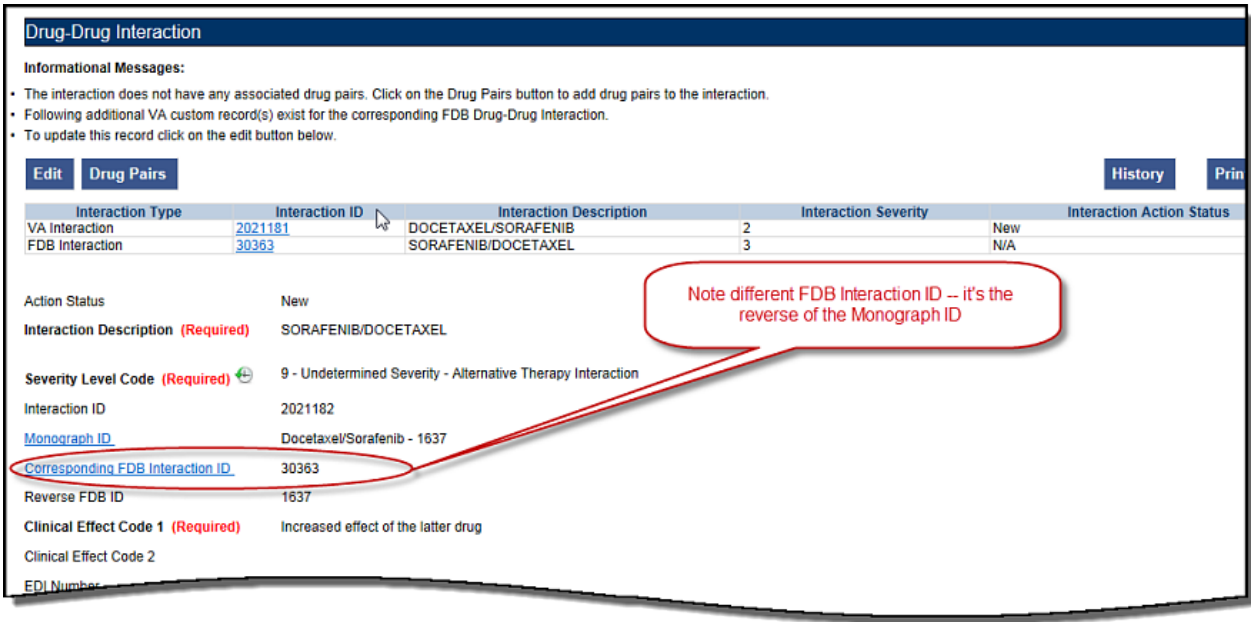
If you click the link associated with the reverse DDI, you will see its detail page (next screen shot):

Figure 83: Choosing the Reverse VA DDI Customization



The detail page of the Reverse VA Customization is displayed:

Figure 84: Reverse FDB Interaction ID



Displaying the Reverse FDB DDI Interaction ID

The Reverse FDB DDI Interaction ID is displayed in the VA custom DDI and DP Detail pages, in the results of DDI and Drug Pair queries and on the FDB Custom DDI Report. The Reverse FDB DDI Interaction ID is defined as the reverse of the FDB DDI ID and is obtained by executing this equation:

32,000 – (minus) FDB Monograph ID.

For example:

- If FDB monograph ID is 2246, the reverse FDB DDI ID is 29745 (32,000 – 2246 = 29745)
- If FDB monograph ID is 29754, the reverse FDB DDI ID is 2246 (32,000 – 29754 = 2246)
- If FDB monograph ID is 0, the reverse FDB Interaction ID is 0 (i.e., DDI was created from scratch using the Open Blank Form option)

Displaying the reverse FDB DDI Interaction ID in the DDI and DP detail pages, query results, and reports enables you to find information about reverse DDIs easily.

11.3.5 Working with Drug Pairs within the DDI

Note that you can work with a drug pair only by starting from the Drug-Drug interaction page, and clicking the Drug Pairs button.

See the Drug Pair Detail for additional information.

11.3.6 Fields

Table 12: DDI Fields

Table Heading Name	Table Heading Description
Monograph ID	The Professional Monograph ID associated with the drug interaction pair.
Action Status	Applicable to VA record only. The point this customization is at, within the VA Approval Workflow.

Table Heading Name	Table Heading Description
Corresponding FDB Interaction ID	The system ID of the FDB record from which the VA customization was created.
Interaction ID	The system ID of this VA customization.
Reverse FDB ID	The FDB ID associated with a customized reverse interaction ID.
Severity Level Code	The level of severity for this Drug-Drug Interaction.
Action Date	Applicable to VA record only. The date of the last action taken on the record.
Action Performed By	Applicable to VA record only. The name of the user that performed the last action.
Request Submitted By	Applicable to VA record only. The name of the user that submitted this VA request.
Action Effective Date	Applicable to VA record only. The date of the last action taken on the record.
Request Assigned To	Applicable to VA record only. A drop down list to assign an approver.
Clinical Effect Code 1	Clinical effect code.
Clinical Effect Code 2	Clinical effect code
EDI Number	The severity level from the Evaluations of Drug Interactions (EDI) system.
EDI Text	The interaction text found in EDI.
DI Facts Number	Severity number of interaction found in DI Facts.
DI Facts Onset	The onset of the interaction as found in DI facts.
DI Facts Severity	The severity level of the interaction found in DI facts.
DI Facts Documentation	Documentation of the interaction found in the DI Facts.
DI Facts Text	The text of the interaction from DI facts.
Micromedex Severity	The severity found in Micromedex.
Micromedex Onset	The onset of the interaction as found in Micromedex.
Micromedex Substantiation	Level of documentation of the interaction found in the Micromedex.
Micromedex Text	The interaction text found in Micromedex.
Medline Hits	A dropdown list to select whether or not this reference was checked.
Medline Text	Brief description of literature results.
Package Insert	A dropdown list to select whether or not this reference was checked.
Package Insert Text	The interaction text found in the package insert.
PBM Criteria	A dropdown list to select whether or not this reference was checked.
PBM Criteria Text	Text information found in PBM criteria.
AIDS Guidelines	A dropdown list to select whether or not this reference was checked.
AIDS Guidelines Text	Text information from the AIDS guidelines.
Interaction Source	A drop-down list to select source.
Interaction Type	A drop-down list to select type.
Highest Level of Evidence	A drop-down list to select the source of the evidence to support the described drug-drug interaction.
Group Discussion	General comment from meeting.
Action Reason History	Applicable to VA record only. All historical current action reason comments for this record, in one viewable field.

Table Heading Name	Table Heading Description
Current Action Reason (optional)	Applicable to VA record only. Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.
Export Date	For Approved or Deleted records. Indicates the date of the last Custom Update. See Export Date for additional information.
Pre-Customization Comment	Approvers can add comments to un-customized FDB records in this field and click the add comment button to save the comment
Pre-Customization Comment History	Displays all comments that have been added to this record prior to customization

11.4 Drug Pair Detail

Drug Pairs are sets of drugs that are associated with a drug-drug interaction. The Drug Pair detail page allows you to view the details of a drug pair associated with a Drug-Drug Interaction. Unlike other detail pages, there is no way to directly edit a drug pair from a drug pair detail page. Instead, you must make the modifications through the associated Drug-Drug Interaction. See Drug Pair Customization (Non 508-Compliant) Detail or Section 508 Compliant Drug Pair Customization Detail for additional information.

Figure 85: The Drug Pair Detail Page – VA

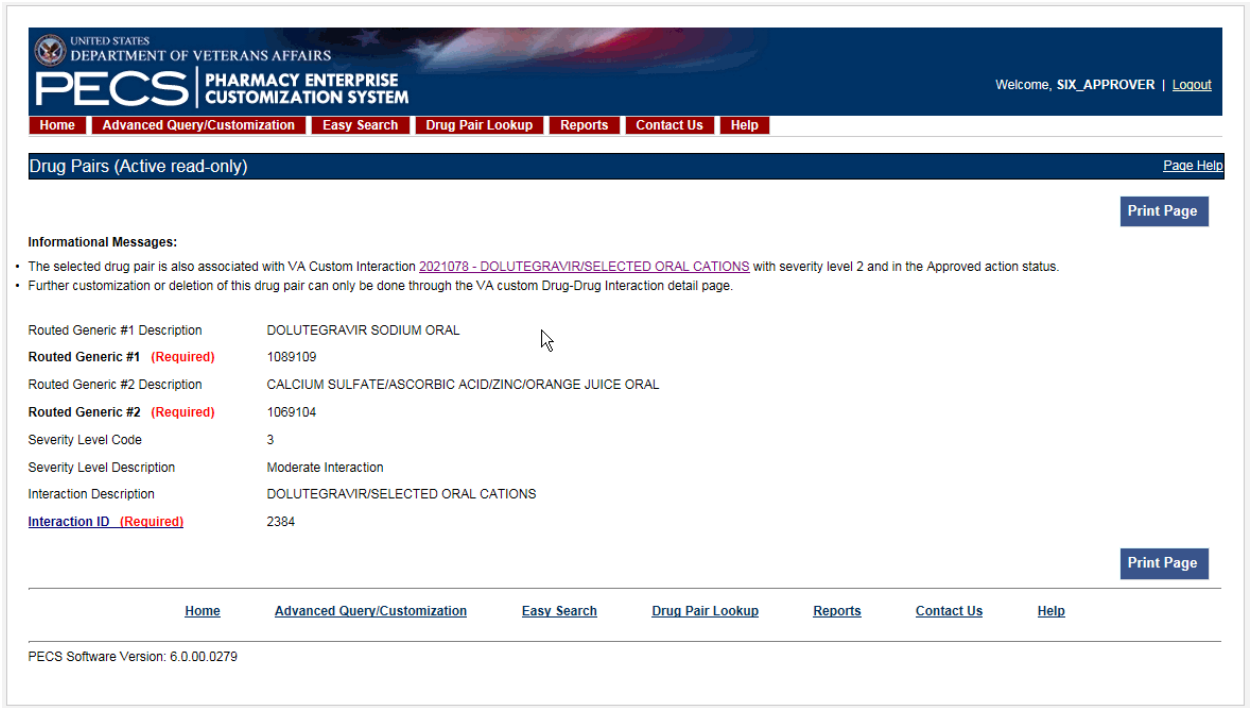
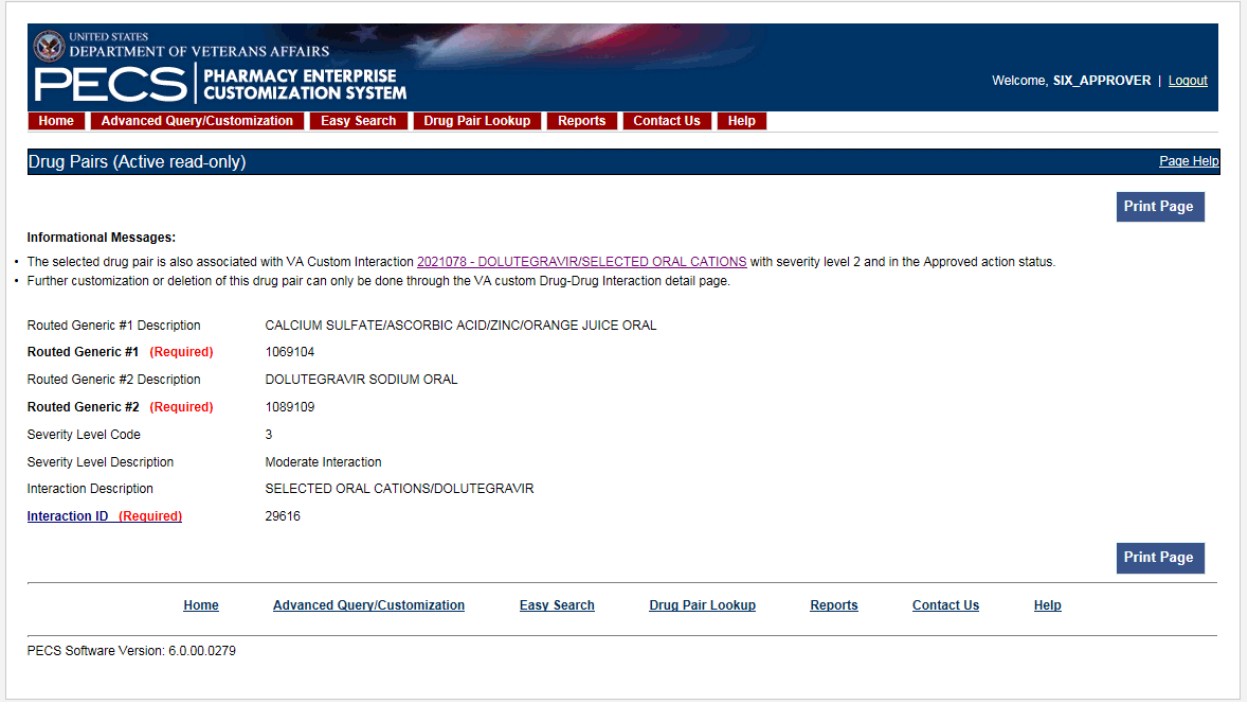


Figure 86: Drug Pair Detail Page - FDB



11.4.1 Fields and Other Information

The information presented on a drug pair detail page is also different from other record types.

Informational Messages

Informational messages are critical with drug pairs; they associate the displayed drug pair with any associated Drug-Drug Interaction.

Figure 87: Example of Informational Messages for Drug Pair Detail

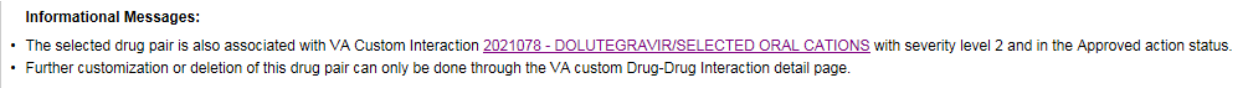


Table 13 describes the fields for a Drug Pair record. Not all fields are applicable to all record types (FDB or VA).

Table 13: Field Descriptions for Drug Pair Detail

Field Name	Field Description
Action Status	Applicable to VA record only. It is the status of this customization within the VA Approval Workflow.
Routed Generic #1	The ID of the first drug in this Drug Pair.
Routed Generic #1 Description	Applicable to FDB record only. The description of the first drug in this Drug Pair.
Routed Generic #2 (required)	The ID of the second drug in this Drug Pair.
Routed Generic #2 Description	The description of the second drug in this Drug Pair.

Field Name	Field Description
Severity Level Code	Applicable to FDB record only. The severity level code for this Drug-Drug Interaction.
Severity Level Description	The description of the severity level code for this Drug-Drug Interaction.
Interaction ID	The ID number of the FDB or VA Custom Drug-Drug Interaction associated with the drug pair.
Interaction Description	Applicable to FDB record only. The description of the Interaction ID that the drug pair is associated with.
Corresponding FDB Interaction ID	Applicable to VA records only. It is the Interaction ID of the FDB record from which the VA Drug interaction customization was created.
Reverse FDB ID	Applicable to VA records only. It is the Reverse FDB Drug-Drug Interaction ID, or the Reverse Interaction ID of the DDI FDB record from which the DDI custom record was created. For more information about the Reverse FDB DDI ID, see "Displaying the Reverse FDB DDI Interaction ID".
Action Performed By	Applicable to VA records only. The name of the user who performed the action.
Request Assigned To	Applicable to VA records only. The name of the PECS user assigned to process the customization request.
Request Submitted by	Applicable to VA records only. The name of the user that submitted this VA request.
Reference Text	Applicable to VA records only. Field for the user to enter any reference text needed to support customization of the drug pair.
Action Reason History	Applicable to VA records only. All historical 'current action reason' comments for this record, in one viewable field.
Current Action Reason	Applicable to VA records only. Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.
Export Date	Applicable to VA records only. Date that the approved or deleted drug pair record was exported to the incremental update file
Action Date	Applicable to VA records only. The date of the last action taken on the record.

11.4.2 Finding Drug Pairs

Drug pairs are usually found and processed directly from the Drug-Drug Interaction they are associated with. However, you can search for them directly using either Advanced Query/Customization or Drug Pair Lookup. When searching for drug pairs directly, what is displayed is dependent the record type (VA or FDB) and whether the associated Drug-Drug Interaction has been customized. In all cases, drug pair records cannot be edited directly; you must work through an associated Drug-Drug Interaction.

- If the results locate a customized VA Drug Pair, the VA Drug Pair detail page for that Drug Pair is displayed. The detail page contains a link to the associated Drug-Drug Interaction(s).
- If the results locate an FDB drug pair record that has been customized by VA, the FDB Drug Pair Detail page is displayed. The detail page contains a link to the FDB Drug-Drug Interaction and the customized VA Drug-Drug Interaction created from the FDB Drug-Drug Interaction.
- If the results locate an FDB drug pair record that has NOT been customized by VA, the associated FDB Drug-Drug Interaction detail page is displayed.

Using Advanced Query/Customization

To find a drug pair using Advanced Query/Customization:

1. Click the Advanced Query/Customization tab.
2. Select Drug Pair from the Select Concept List and select the appropriate drug pair type from the Select VA, FDB, or Both list.
3. Build the query to find the appropriate drug pair and click Query.
4. Click the link in the Select column to open the record. The record that is displayed depends on the record type.

See Using Advanced Query/Customization for additional information.

Using Drug Pair Lookup

To find a drug pair using Drug Pair Lookup:

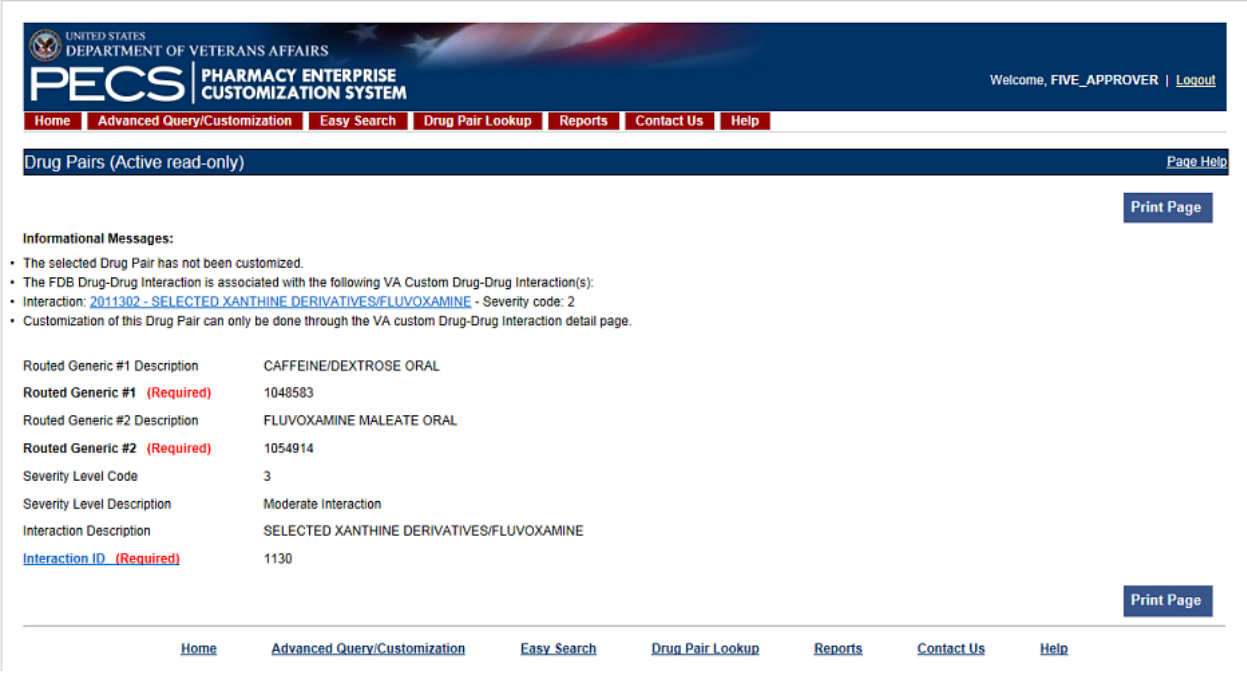
1. Click the Drug Pair Lookup tab.
2. Build the query to find the appropriate drug pair and click Query.
3. Click the link in the Select column to open the record. The record that is displayed depends on the record type.

See Drug Pair Lookup for additional information.

11.4.3 FDB Drug Pair Detail Page

When a user opens an FDB Drug Pair that is not customized, but the associated FDB Drug-Drug Interaction is customized, the FDB Drug Pair Detail Page is displayed. The informational message will contain all VA Custom Drug-Drug Interactions associated with the FDB Drug-Drug Interaction(s) associated with the drug pair. To customize the drug pair, click the appropriate linked interaction in the informational message.

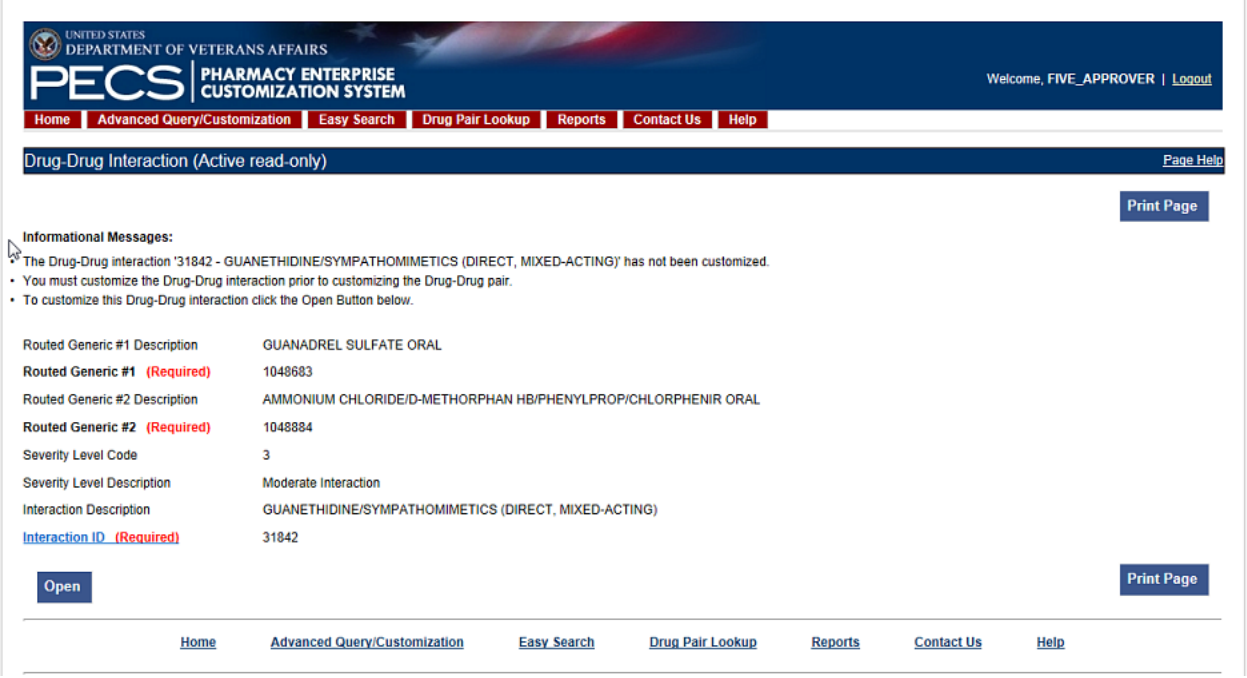
Figure 88: Uncustomized FDB Drug Pair



FDB Drug Pair Not Customized, Not Associated with Customized Drug-Drug Interaction

When you open an FDB drug pair that has not been customized and is not associated with a customized Drug-Drug Interaction, the FDB Drug-Drug Interaction associated with the drug pair is displayed. To customize the FDB Drug-Drug Interaction and the associated drug pairs, click the Interaction ID link.

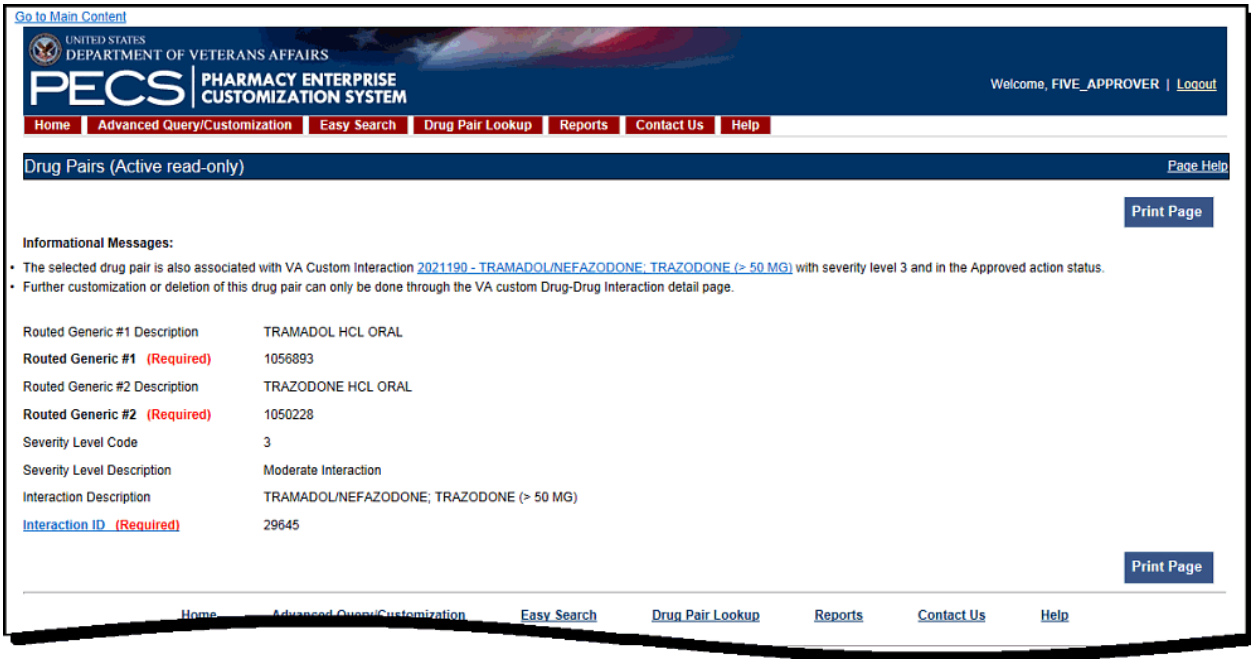
Figure 89: FDB Drug-Drug Interaction without Customized Drug Pairs



FDB Drug Pair Customized Once

When a user opens an FDB Drug pair that has been customized once, they will be presented with the VA customized drug pair and a link to the associated VA Drug-Drug Interaction ID.

Figure 90: Drug Pair Detail Page (Read Only)

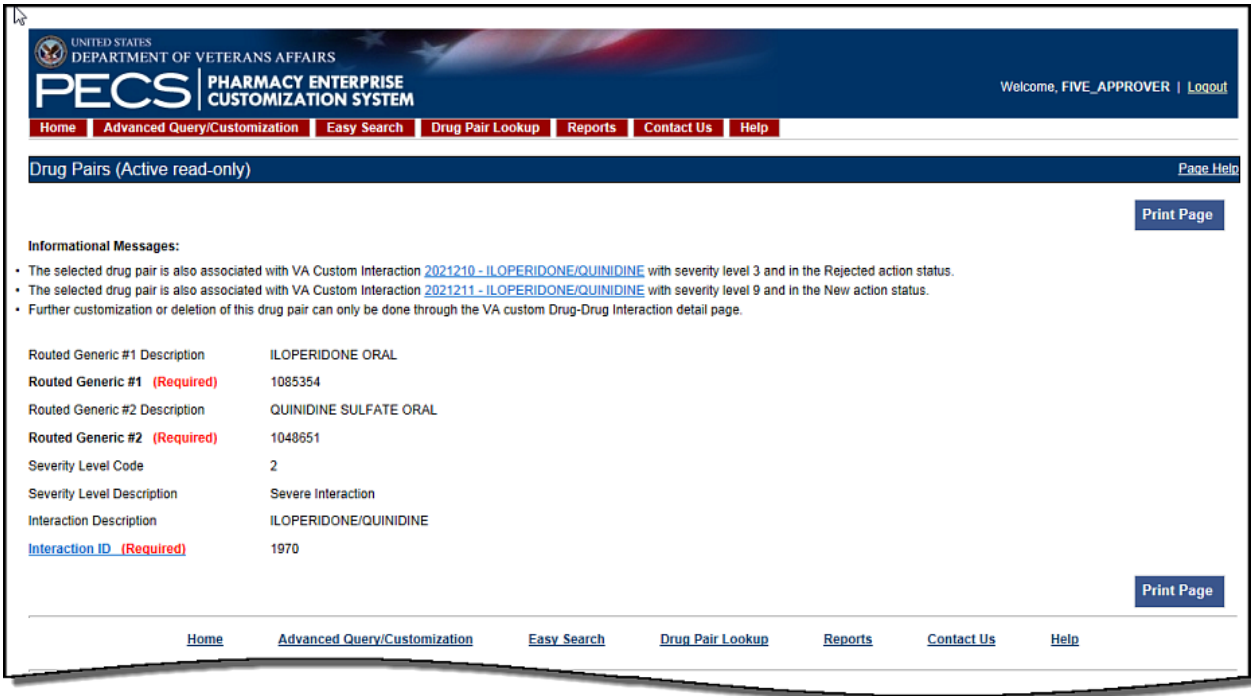


FDB Drug Pair Customized More Than Once

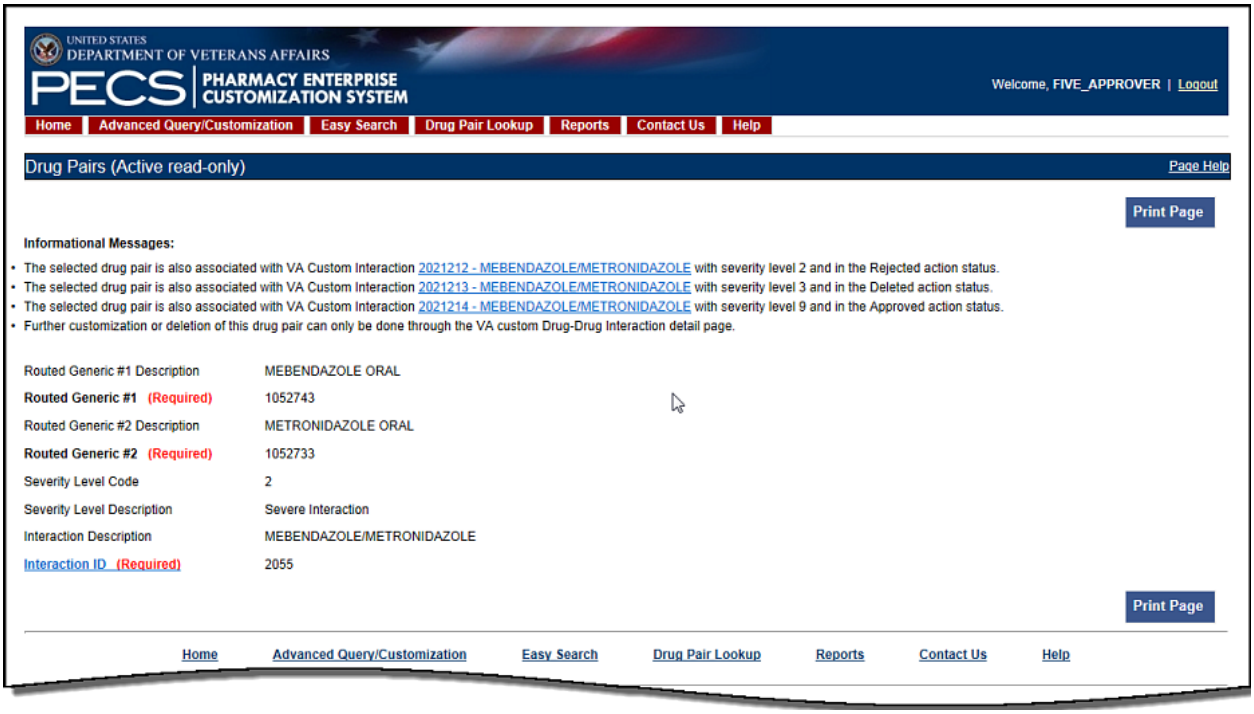
An FDB Drug Pair can be customized more than once. For example; a Drug Pair can be customized for a VA Drug-Drug Interaction and subsequently rejected or deleted. It can then be customized a second time for a different VA DDI. In this case, when the user opens the FDB Drug Pair record, they will not only

get information about the FDB drug pair and its associated FDB DDI, they will see two messages about the drug pair and the custom VA DDIs it is associated with. One message says that the drug pair is rejected and another message says that it is in the New Action Status. Two examples follow:

1. The following example shows what will display if the user opens an FDB Drug Pair that was customized for and subsequently rejected from DDI 2021210, and then customized a second time for DDI 2021211. Note the informational messages and the links to the FDB and custom VA DDIs:



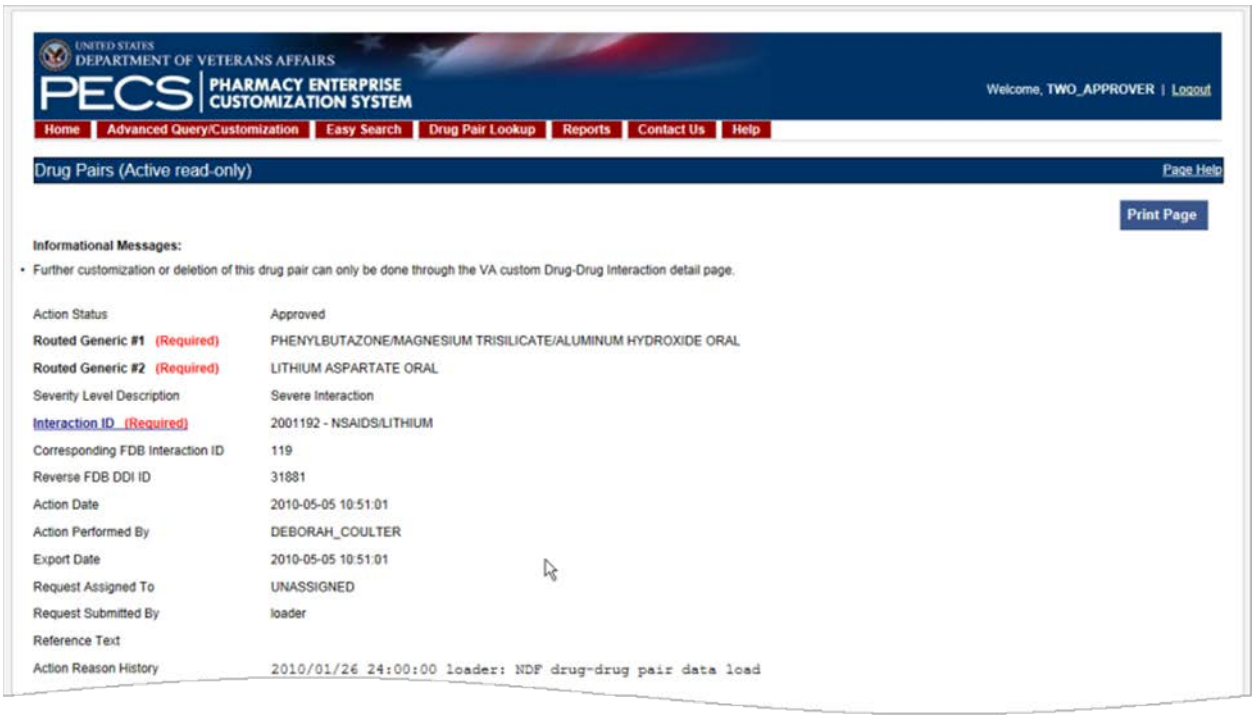
2. The following example shows what will display if the user opens an FDB Drug Pair that was customized and subsequently rejected from DDI 2021212, customized a second time and subsequently deleted from DDI 2021213, and customized for DDI 2021214. Note the informational messages and links to all customizations:



11.4.4 VA Customized Drug Pair Detail Page

When the user opens a VA Customized drug pair, they will be presented with the customized Drug Pair Detail page.

Figure 91: VA Customized Drug Pair



11.5 Drug Pair Customization (Non 508-Compliant) Detail

The Drug Pair Customization (Non 508 Compliant) page allows users to create or delete drug pairs associated with the VA Customized Drug-Drug Interaction as well as perform mass VA Workflow updates to all associated Drug Pairs. To reach this page, click the 'Drug Pairs' button on a VA customized Drug-Drug Interaction detail page.

Figure 92: Drug Pair Customization Window

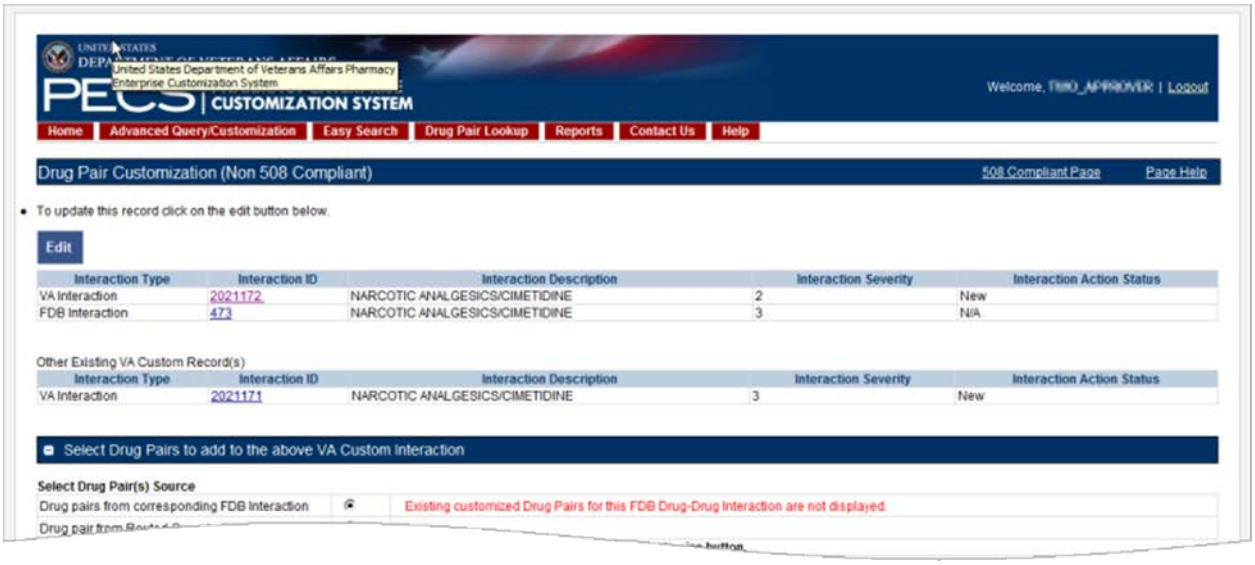


Table 14 on the page displays information related to the drug pair.

Table 14: Drug Pair-related Information

Field Name	Field Description
Interaction Type	The type of interaction displayed, either VA or FDB.
Interaction ID	The numerical reference number assigned to the interaction by the agency referenced in the Interaction Type field.
Interaction Description	The name of the drug pair associated with the interaction.
Interaction Severity	A numerical indicator of the severity of the interaction.
Interaction Action Status	The status of the interaction in the VA Approval Workflow. The Action Status for FDB Records will always be 'N/A,' as it does not go through the VA Approval Workflow

There are two methods to add drug pairs to a drug-drug interaction customization: from existing FDB Drug Pairs (see page) and from Routed Generics (see page).

Fields

Field Name	Field Description
Reference Text	Field for the user to enter any drug pair reference text needed to support the addition of this/these drug pair(s).
Current Action Reason	Applicable to VA record only. Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.

Buttons

Button Name	Button Description
Customize	Creates the Drug Pair record and associates it to the VA Customized Drug-Drug Interaction.

Button Name	Button Description
Cancel Edit	Disregards chosen Drug Pair and any text entered into fields and collapses this panel.

11.5.1 Drug Pairs Panel

The Drug Pairs panel contains all the VA Customized Drug Pairs already associated to the VA Customized Drug-Drug Interaction (noted at the top of the page). The panel contains

- Interaction Description - VA Customized Drug-Drug Interaction Description
- Routed Generic #1 Description - First drug in the drug pair
- Routed Generic #2 Description - Second drug in the drug pair
- Action Status - current status of the Drug Pair
- Request Submitted By - User ID of the PECS user who made the initial customization request
- Action Date - The date of the most recent action
- Action Performed By - User ID of the PECS user who performed the most recent action
- Request Assigned To - User ID of the PECS user who is responsible for reviewing the drug pair information
- Interaction ID - The numerical identifier for the Drug-Drug Interaction
- Severity Level Description - A text description of the interaction severity
- Reference Text - Contents of the Reference Text field
- Severity Level Code - A numerical identifier for the severity of the Drug-Drug Interaction

The checkboxes at the top allow you to filter what is displayed in the interaction table by Action Status (Historical records are not displayed). You can only process records that are in the same Action Status.

Figure 93: Drug Pair List Filters

The 'Get Record Counts' button displays count of all VA customized drug pairs associated with the Drug-Drug Interaction. This helps the user to determine how many drug pairs to select to perform an action against at one time. It is recommended that quantities be limited to 200 drug pairs at a time to prevent negative impacts to system performance.

For more information, see the following:

- Customizing Drug Pairs from the Selection List
- Drug-Drug Interaction Detail

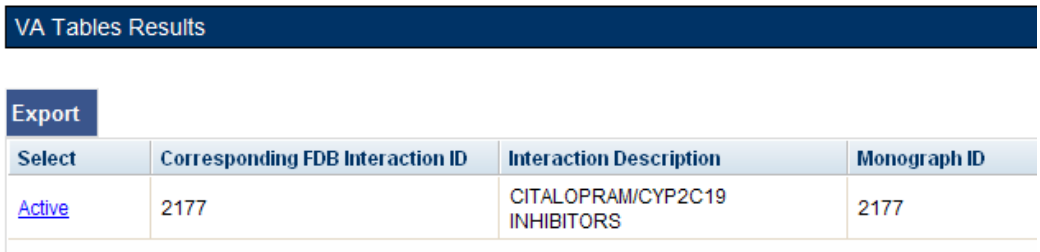
11.5.2 Notification of Drug Pairs Needing Action for an Approved Drug-Drug Interaction

The drug pairs that are associated with a Drug-Drug Interaction (DDI) need to go through the approval/status change process themselves (be approved, rejected, modified, or deleted), separately from the DDI. If the drug pairs are acted upon at the same time as the DDI is acted upon, there is no problem in an Approver knowing that the drug pair needs to be acted upon. However, drug pairs may be added or modified even after a DDI has been acted upon. The way an Approver will know if they need to act on a drug pair associated with an already-approved DDI is by the row on the home page tables that displays the row “Approved Drug-Drug Interaction with Pending Drug Pairs.”

Figure 94: Approved DDIs with Pending Drug Pairs on Home Page

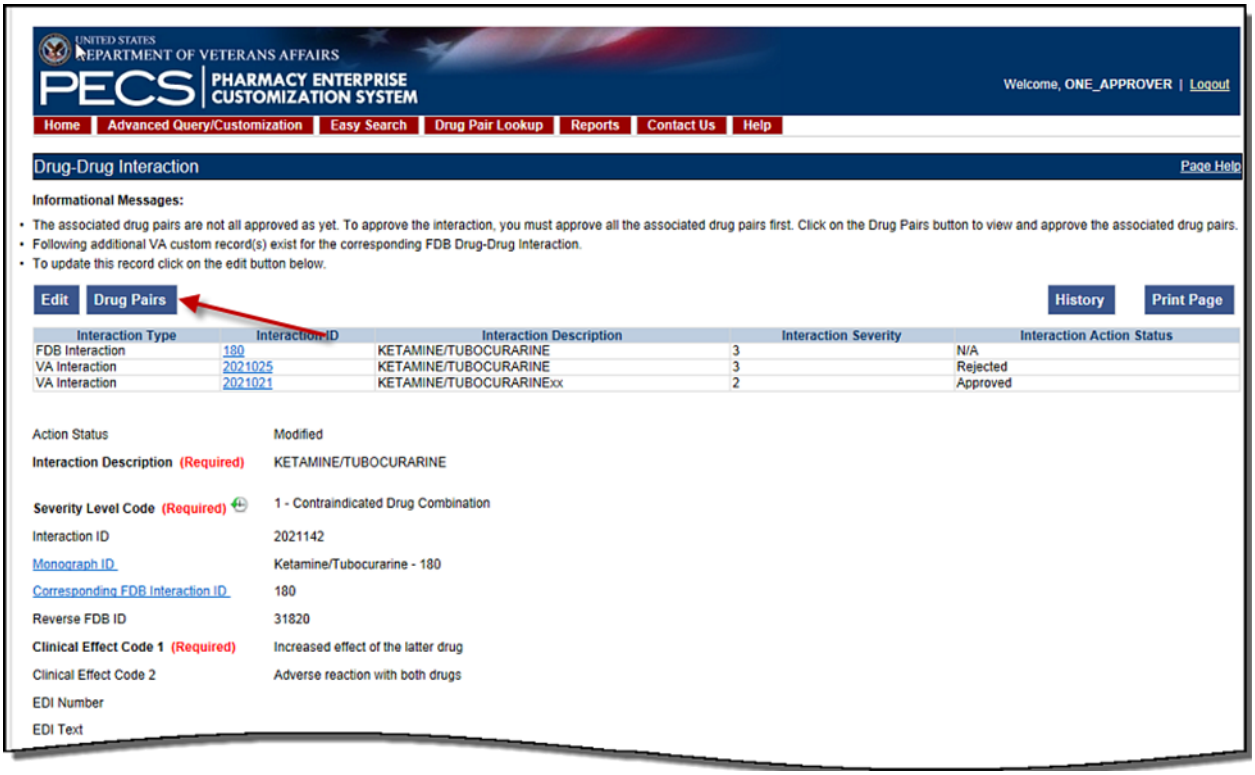
From the screen above, if you select the link "My Assigned Drug Pairs Associated with Approved Drug-Drug Interactions" for one of the states listed that has actual counts (not zero), you are taken to the Advanced Query/Customization page that displays the results for all Drug-Drug Interactions with associated Drug Pairs assigned to you in that state. Here you can act on the drug pairs.

Figure 95: My Assigned DDIs with Pending Drug Pairs List



Here is the Interaction window shown after the link is clicked from the Advanced Query Page (Figure 94). On the Interaction window you can act on the drug pairs -- to do so, click the Drug Pairs button:

Figure 96: DDIs with Needed Drug Pairs – Add with Drug Pairs Button



After you click the Drug Pairs button, you can go through the process described in Customizing Drug Pairs from the Selection List (after you click the Edit button).

The paragraphs below describe in detail the process for assigning the request to other Approvers for action.

When you are working with the Drug Pair customization window, there is a drop-down where you can assign the request to a user ID. The default is the Approver who is assigned to the DDI, but you can change that.

Figure 97: Assigned To: Drop-Down

If you change the status of the drug pairs to Submit as Reviewed or Submit for Delete, the drug pairs are automatically reassigned to the "Unassigned" User ID if the user who is assigned to the DDI is the same user who is making the status change. The reassignment happens because the person who submits can't also do the approval or delete the drug pairs.

Notes:

If you change the status of the drug pairs to Submit as Reviewed or Submit for Delete, the drug pairs are automatically reassigned to the "Unassigned" category.

If you wish to put a Drug-Drug Interaction (DDI) into the Delete_Reviewed status, the Drug Pairs associated with the DDI must be in either a "Delete Reviewed," "Rejected" or "Deleted" status.

	A routed generic Drug Pair that was deleted and then customized in the reverse order will be listed with those in the New Action Status and displayed in reverse order in the Drug Pairs table on the Drug Pairs Customization page.

11.5.3 Customizing Drug Pairs from the Selection List

PECS allows you to create multiple drug pairs for an interaction at one time. This same multi-select method allows you batch process drug pairs for other operations such as Review, Reject, and Delete. The process differs slightly between drug pairs created from a corresponding FDB interaction or using routed generic drugs.

Adding Drug Pairs from Corresponding FDB Interaction

When adding FDB Drug Pairs to an interaction on the Batch Customization page, you may select single drug pairs, groups of consecutive drug pairs, or a combination of both.

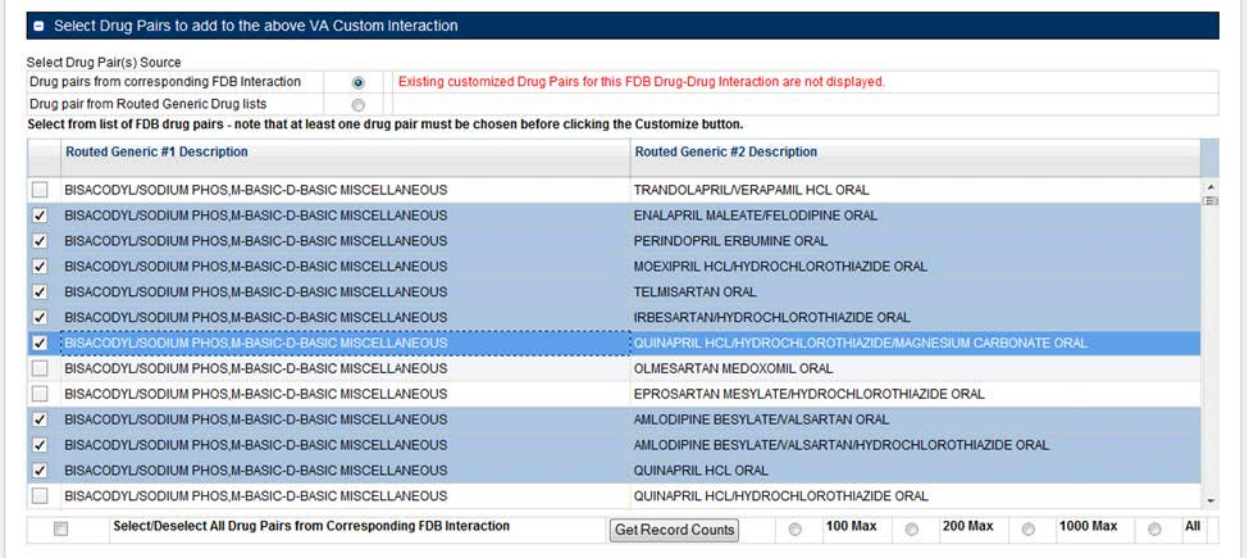
Note:	The following instructions are written for the screen that is non-compliant for Section 508. See Section 508 Compliant Drug Pair Customization Detail for instructions on how to use the compliant screen.

To select single drug pairs, simply click on the corresponding checkboxes of the drug pairs you want to select.

Figure 98: Drug Pair Selection List

To select groups of consecutive drug pairs, click on the first checkbox in the group and then Shift + click on the last checkbox in the group. All drug pairs between the first and last checkboxes will be selected. If you wish to add another group to your selection, simply click on the first checkbox in the second group and shift/click on the last checkbox in the group. You will now have two groups of drug pairs selected. To add other non-consecutive drug pairs, click on the corresponding checkbox.

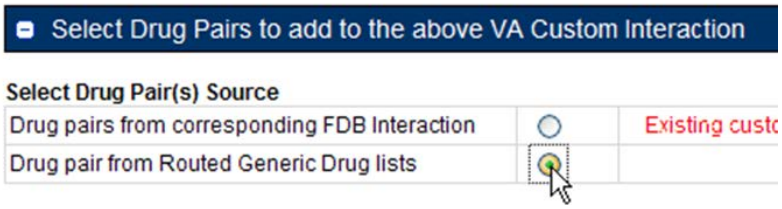
Figure 99: Large Group of Selected Drug Pair for Batch Update



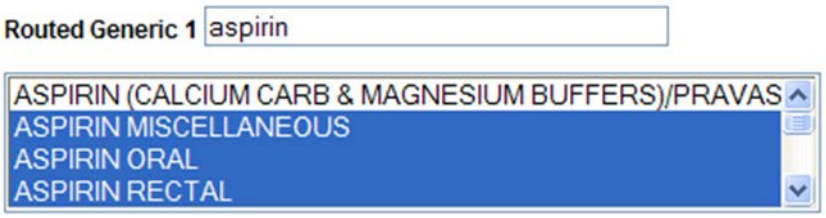
Drug Pairs from Routed Generic Drugs

To select multiple drug pairs from Routed Generic drugs:

1. On the Drug Pair Customization window, select Drug pair from Routed Generic Drug lists from the Select Drug Pair(s) Source list.

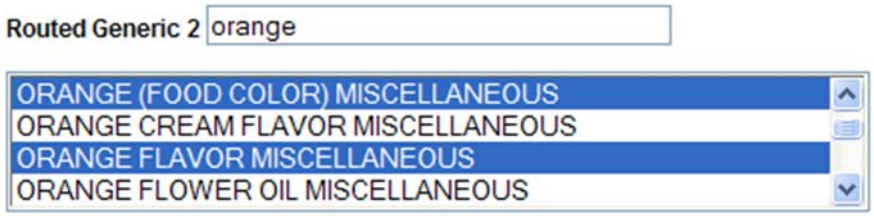


2. Click Edit.
3. Enter all or part of a routed generic drug name in the Routed Generic 1 field. To display all routed generic drugs, enter *. The list will populate automatically, but the process may take some time based on server load and the specificity of the search term.
4. Enter all or part of a routed generic drug name in the Routed Generic 2 field. To display all routed generic drugs, enter *. The list will populate automatically, but the process may take some time based on server load and the specificity of the search term.
5. To select a range of routed generic drugs from the results list, click the first item in the range, then Shift + click (click while holding down the shift key) the last item in the range. You can use the scroll bar on the results list if the last item in the range is not immediately visible.

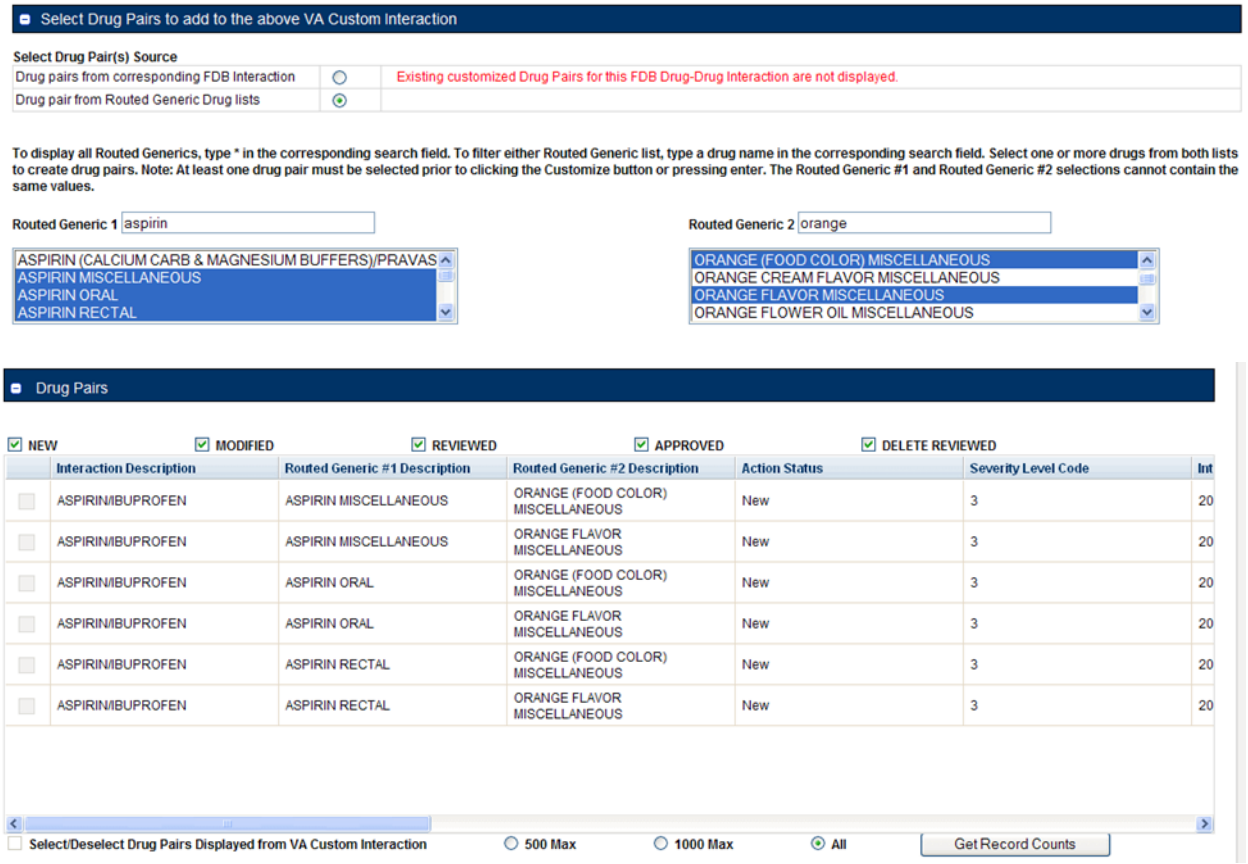


6. To select non-contiguous items in the results list, click to select the first item, then Ctrl + click (click while holding down the Ctrl key) any additional items. You can use the scroll bar on the

results list if the last item in the range is not immediately visible. This technique can also be used to de-select items within a previously selected range of items.



7. Click the Customize button. After processing, the new drug pairs will appear in the Drug Pairs list. In this example, six new drug pairs were created: each of the three selected Routed Generic 1 drugs is now paired with the two selected Routed Generic 2 drugs.



Batch Update Drug Pairs

You can use the quick selection processes describe above to change the actions status of multiple drug pairs at the same time. The Action buttons available are dependent upon the action status of the selected drug pairs. Only mutually appropriate actions will be available.

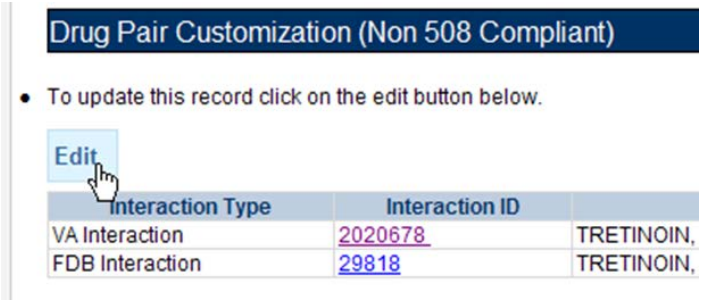
11.5.4 Review a Drug Pair

An Approver may be assigned to review drug pairs associated with a drug-drug interaction. Your options are to either Submit as Reviewed, indicating that the Drug Pair associated with the drug-drug interaction is appropriate, or Reject the Drug Pair as inappropriately associated with the Drug-Drug interaction.

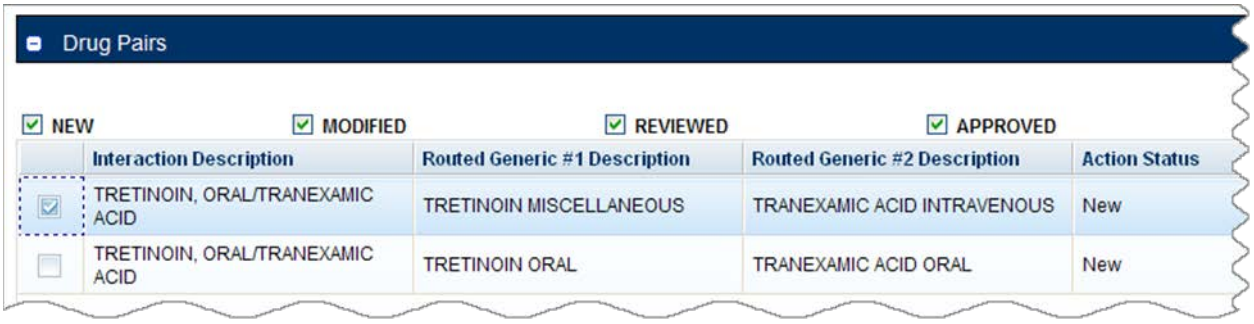
To review a drug pair associated with an interaction customization:

1. From the Drug-Drug Interaction record, click Drug Pairs.

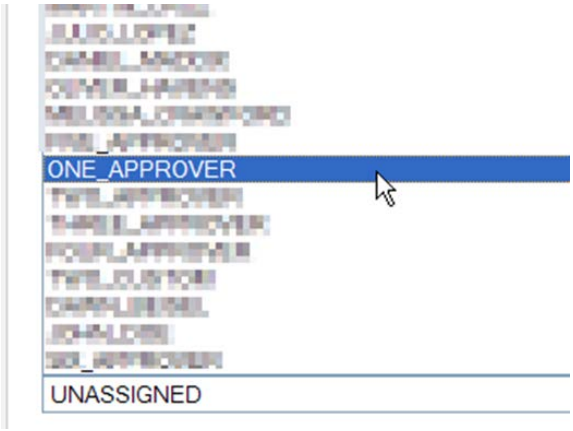
2. When the Drug Pair Customization page appears, click Edit.



3. In the Drug Pairs panel, select one or more drug pairs currently associated with the drug-drug interaction. For information on selecting multiple items within a list, see Customizing Drug Pairs from the Selection List.



4. Using the Assigned To list, select the person to Approve the drug pair association with the selected drug-drug interaction. If you are not sure who this should be, select Unassigned.



5. Click Submit as Reviewed to indicate that you have reviewed and agree that the drug pair is correctly associated with the selected drug-drug interaction; Click Reject to indicate that you do not agree that the drug pair is correctly associated with the selected drug-drug interaction-- this

will remove the drug pair from the record; Click Cancel Edit to abandon the current editing session and leave the record unchanged.

Note:	Drug Pair records can be modified after they have been Reviewed.

11.6 Section 508 Compliant Drug Pair Customization Detail

Note:	These are the instructions for the Section 508 compliant version of the Drug Pair Customization page. For Non-compliant Drug Pair customization, see Drug Pair Customization (Non 508-Compliant) Detail.

To reach the Section 508-Compliant version of the Drug Pair Customization page:

1. Click the 'Drug Pairs' button on a VA customized Drug-Drug interaction detail page.
2. Click the 508-Compliant Page link in the Drug Pair Customization banner.

Figure 100: Link to Access 508-Compliant Drug Pair Selection Page

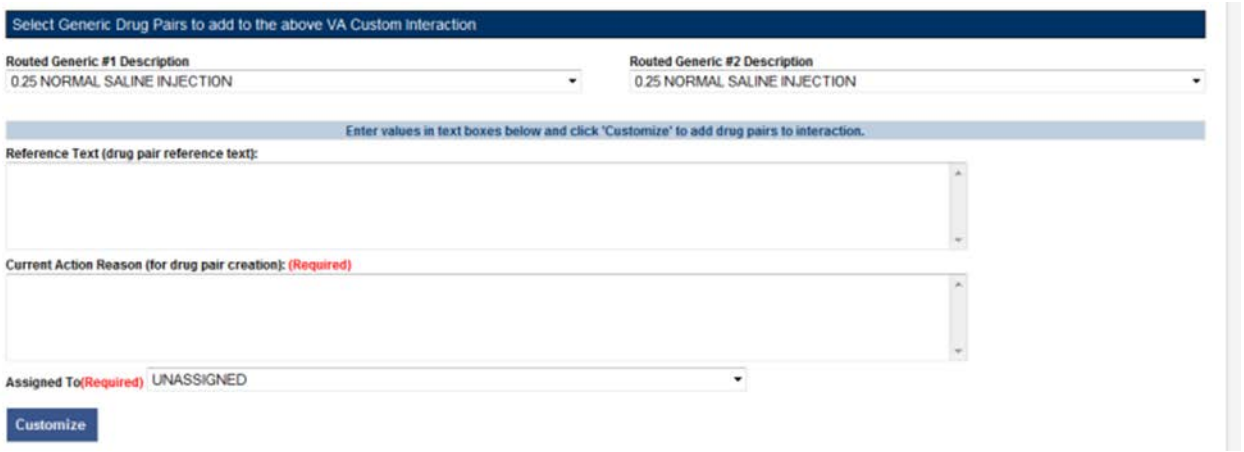
11.6.1 Select Drug Pairs to Add to the Above VA Custom Interaction Panel

These are instructions on how to select drug pairs on the Section 508 Compliant Drug Pair Customization page.

Add Routed Generic to VA Custom Interaction

If the interaction is customized from a blank form, there are no FDB drug pairs to choose from. The user will choose drug pairs from Routed Generic drug lists. The user will select the first drug “Routed Generic #1 Description” and then select the second drug “Routed Generic #2 Description” for the Drug Pair they are associating to this VA customized Drug-Drug Interaction. Note that a drug pair must be chosen before clicking the “Customize button”. “Routed Generic #1” and “Routed Generic #2” fields cannot contain the same chosen value. “'Routed Generic #1” and “Routed Generic #2”' must follow the same order as the Interaction Description. The user must be careful to select all routed generics that contain the desired drug as an ingredient. Combination products may not fall alphabetically close to single ingredient products. The Routed Generic drug lists can also be used to add drug pairs to a drug-drug interaction customized from an FDB record if the drug pairs to be added do not exist in the FDB database.

Figure 101: Routed Generic Drug List on 508-Compliant Page



To add a Routed Generic drug pair:

1. Click the Edit button.

In the "Select Generic Drug Pairs to add to the above VA Custom Interaction" panel, select the first drug from the Routed Generic #1 Description list.

Select the second drug from the Routed Generic #2 Description list.

Add any available reference text to the Reference Text field. This is not required.

Add a reason for your current action in the Action Reason field. This is required.

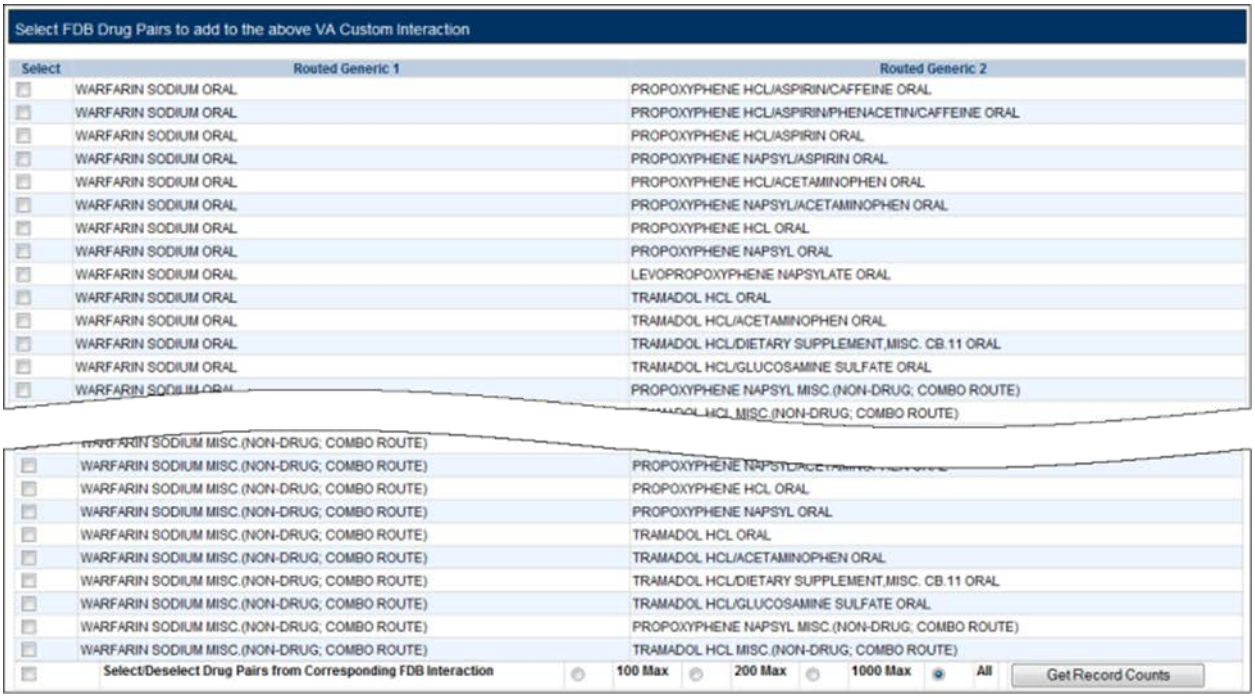
Select a PECS user to review your action in the Action Reason field.

Click the Customize button.

Add FDB Drug Pairs to VA Custom Interaction

If the interaction is customized from an FDB record, you can select any or all of the corresponding FDB drug pairs. Each FDB drug pair consists of Routed Generic #1 and Routed Generic #2. Select the checkbox adjacent to the drug pair or pairs to select it to add to the custom interaction.

Figure 102: Corresponding FDB Drug Pairs, 508-Compliant Page



To add a FDB drug pair:

1. Click the Edit button.
2. In the "Select FDB Drug Pairs to add to the above VA Custom Interaction" panel, select the check box adjacent to the drug pair you want to add to the customization. You can select more than one drug pair. To select all the drug pairs, select the 'Select/Deselect All Drug Pairs Displayed from Corresponding FDB Interaction' check box; to limit the number selected, select one of the number-specific radio buttons.
3. Add any available reference text to the Reference Text field. This is not required.
4. Add a reason for your current action in the Action Reason field. This is required.
5. Select a PECS user to review your action in the Action Reason field.
6. Click the Customize button.

Drug Pairs Panel

The Drug Pairs panel contains all the VA Customized Drug Pairs already associated to the VA Customized Drug-Drug Interaction (noted at the top of the page). The panel contains:

- Interaction Description - VA Customized Drug-Drug Interaction Description
- Routed Generic #1 Description - First drug in the drug pair
- Routed Generic #2 Description - Second drug in the drug pair
- Action Status - current status of the Drug Pair
- Request Submitted By - User ID of the PECS user who made the initial customization request
- Action Date - The date of the most recent action
- Action Performed By - User ID of the PECS user who performed the most recent action
- Request Assigned To - User ID of the PECS user who is responsible for reviewing the drug pair information
- Interaction ID - The numerical identifier for the Drug-Drug Interaction
- Severity Level Description - A text description of the interaction severity
- Reference Text - Contents of the Reference Text field
- Severity Level Code - A numerical identifier for the severity of the Drug-Drug Interaction

The checkboxes at the top allow the user to what is displayed in the interaction table by Action Status (Historical records are not displayed). The drug pairs must be in the same state before an action can be performed on them.

Figure 103: Drug Pair List Filters

The 'Get Record Counts' button will display the count of all VA customized drug pairs associated with the Drug-Drug Interaction. This helps you to determine how many drug pairs require processing. It is recommended that no more than 200 drug pairs are processed at a time to prevent negative impacts to system performance.

To perform a batch update on the drug pairs:

1. Use the Action Status checkbox filters to make sure all drug pairs selected are in the same Action Statuses
2. Select the amount that will be updated in this one action
3. Select all or the individual drug pairs
4. Select the allowed Approval Workflow action to be performed (Submit as Reviewed, Approve, Reject, etc.)

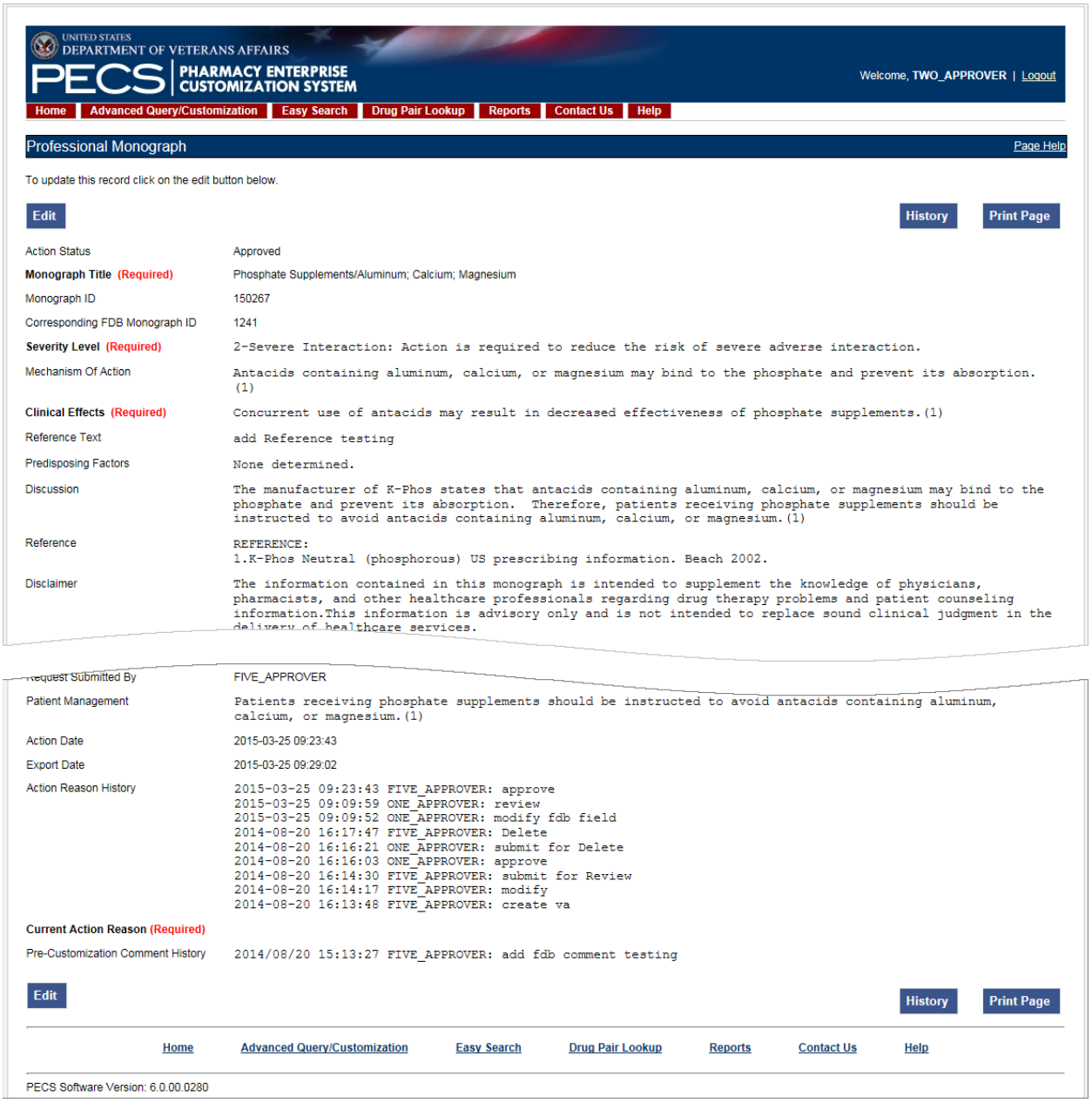
Repeat this process for all of the drug pairs until the entire set of drug pairs is in the desired point in the Approval Workflow.

11.7 Professional Monograph Detail

A Professional Monograph is a document containing drug interaction information written for healthcare professionals. The Professional Monograph Detail Page allows the user to view the details of a Professional Monograph and customize it for VA use.

FDB monographs are not generally customized, however some Professional Monographs have been created from blank documents at the national level for drug interactions that do not appear in the FDB database

Figure 104: Professional Monograph Detail, Top and Bottom



11.7.1 Fields

Fields that cannot be modified are shaded within PECS.

Table 15: Professional Monograph Fields

Field Name	Field Description
Monograph Title	The title Monograph is usually the two drugs that have the interaction.
Monograph ID	The VA-assigned numerical identifier for the Monograph.
Action Status	Applicable to VA record only. The point this customization is at, within the VA Approval Workflow.
Action Date	Applicable to VA record only. The date of the last action taken on the record.
Action Performed by	Applicable to VA record only. The name of the user that performed the last action.
Action Effective Date	Applicable to VA record only. The date of the last action taken on the record.
Corresponding FDB Monograph ID	The First Databank (FDB)-assigned numerical identifier for the Monograph.
Request Assigned To	Applicable to VA record only. Approver the request is assigned to.
Request Submitted By	Applicable to VA record only. The name of the user that submitted this VA request.
Severity Level	The severity level associated with the interaction.
Mechanism Of Action	The specific biochemical interaction through which a drug interaction occurs. For instance, pharmacokinetic drug interactions may include: o Inhibition of absorption o Enzyme inhibition increasing the risk of toxicity o Enzyme inhibitors resulting in reduced drug effect o Enzyme induction resulting in reduced effect o Enzyme induction resulting in toxic metabolites o Altered renal elimination Pharmacodynamic drug interactions include: o Additive effects o Antagonistic pharmacodynamic effects
Clinical Effects (required)	The Clinical effects associated with the interaction.
Predisposing Factors (optional)	The factors or conditions that render an individual vulnerable to a drug interaction?
Patient Management (optional)	Describe the management options available to the provider, for example: Discontinuation of the medication Increased monitoring Laboratory tests Scheduling the medication at different times
Discussion	Usually case reports or discussion.
Reference	Cited reference information.
Disclaimer	Textual reminder that the information provided is not intended to replace the user's clinical judgment.
Reference Text	Applicable to VA record only. Field for the user to enter any reference text needed to support customization of the Professional Monograph.
Action Reason History	Applicable to VA record only. All historical current action reason comments for this record, in one viewable field.

Field Name	Field Description
Current Action Reason	Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.
Export Date	For Approved or Deleted records. Indicates the date of the last Custom Update. See Export Date for additional information.

11.7.2 Buttons

Print Page - Allows the user to print the page being viewed.

History - Allows the user to open the history of changes report.

Comment - Add a pre-customization comment (FDB Only)

11.7.3 Forward and Reverse Professional Monograph

A single VA Custom Drug-Drug Interaction could be associated with a separate custom Professional Monograph for the forward and reverse interactions. An interaction described as Drug A and Drug B would have a different Custom Monograph from an interaction described as Drug B and Drug A. These different monographs may be necessary because there could be a different Clinical Effect Code between forward and reverse interactions (DrugA+DrugB: Clinical Effect Code = Adverse effects of the former drug; DrugB+DrugA: Clinical Effect Code = Adverse effects of the latter drug).

The following VA Custom Professional Monograph pairs will be associated with each other. This means that when a Monograph is assigned to a VA Custom Drug-Drug Interaction, the corresponding Monograph will be automatically assigned to the reverse Drug-Drug Interaction (DDI1 = DrugA + DrugB; DDI2 = DrugB+DrugA).

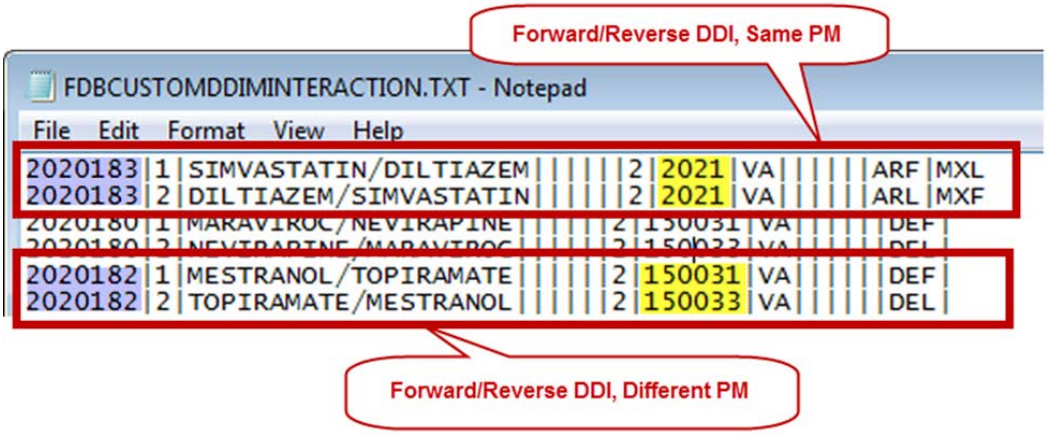
Here is a list of the monograph IDs and titles, and the paired Monograph ID and title.

Table 16: Forward and Reverse Professional Monograph Pairs

Monograph ID and Title	Paired Monograph ID and Title
150022 VA Customized: Adverse Effects of Former Drug (Critical) (ARF1)	150024 VA Customized: Adverse Effects of Latter Drug (Critical) (ARL1)
150023 VA Customized: Adverse Effects of the Former Drug (Significant) (ARF2)	150025 VA Customized: Adverse Effects of the Latter Drug (Significant) (ARL2)
150030 VA Customized: Decreased Effects (Critical) (DEF1)	150032 VA Customized: Decreased Effects (Critical) (DEL1)
150031 VA Customized: Decreased Effects (Significant) (DEF2)	150033 VA Customized: Decreased Effects (Significant) (DEL2)
150034 VA Customized: Increased Effects (Critical) (INF1)	150036 VA Customized: Increased Effects (Critical) (INL1)
150035 VA Customized: Increased Effects (Significant) (INF2)	150037 VA Customized: Increased Effects (Significant) (INL2)
150040 VA Customized: Mixed Effects of Former Drug (Critical) (MXF1)	150103 VA Customized: Mixed Effects of Latter Drug (Critical) (MXL1)
150041 VA Customized: Mixed Effects of the Former Drug (Significant) (MXF2)	150104 VA Customized: Mixed Effects of the Latter Drug (Significant) (MXL2)

When viewing a Drug-Drug Interaction, the PECS user interface will only display the Professional Monograph associated with the Forward interaction. The associated Reverse Professional Monograph will only be visible in the custom updates file created by the Release Manager.

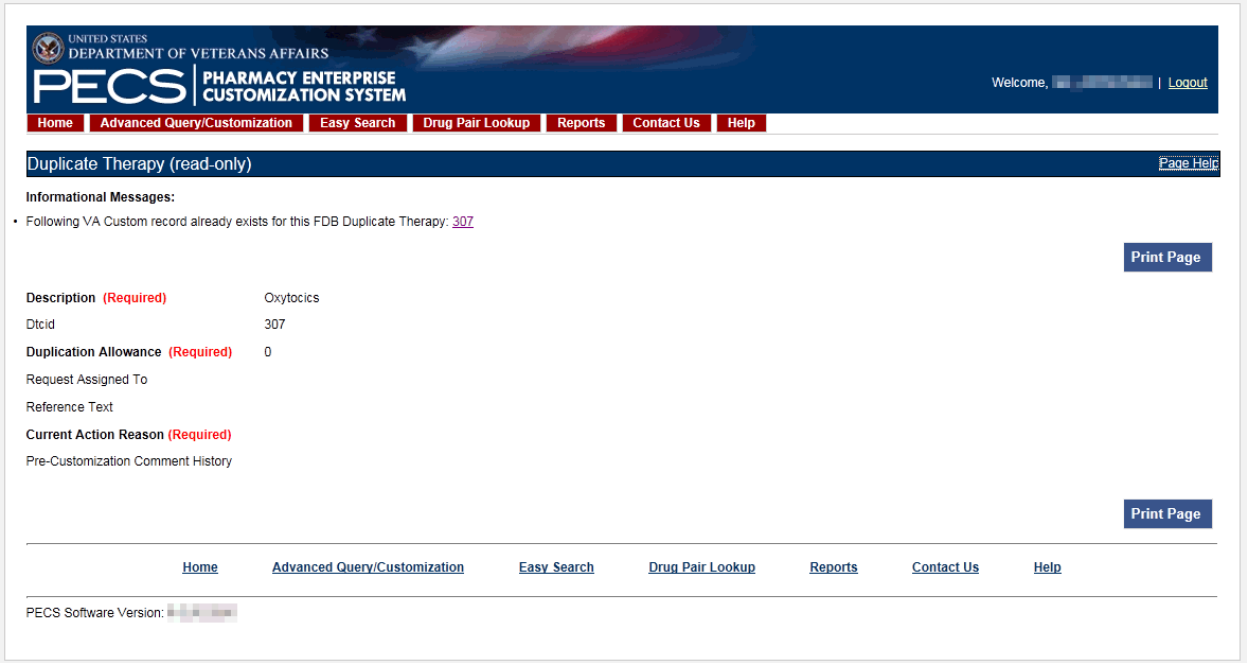
Figure 105: Forward/Reverse DDIs with Professional Monographs, Custom Update File Created by Release Manager



11.8 Duplicate Therapy Detail

The Duplicate Therapy Detail page allows you to view and edit the details of a Duplicate Therapy record. If you edit an FDB record, the result is a VA Customization Request. For FDB records that have not been customized, you also have the option of adding a comment that will be retained with the record; if the record is later customized, these pre-customization comments will be displayed with the customized record. Once the FDB record has been customized, a link to the VA customized record will be provided. FDB Duplicate Therapy records can be customized only once; if the record has already been customized, it displays in Read-only mode, and you will not be able to customize it again (the Edit button will not display).

Figure 106: Duplicate Therapy Detail



11.8.1 Fields

Table 17: Duplicate Therapy Detail Fields

Field Name	Field Description
DTCID	Duplicate therapy ID assigned by First Databank (FDB).
Custom Dup Allowance	The number of drugs a patient can be prescribed, within a Therapeutic Drug Class, before an alert is generated. A 0 duplicate allowance means only 1 medication from that Therapeutic class can be on the patient profile without getting an order check (zero duplication). If a second drug from that class is added the provider gets the order check. If the allowance is 1, two drugs can be on the patient profile at once, the 3rd drug added would get the check (one duplication), etc.
Description	The name of this Therapeutic Drug Class.
Action Status	Applicable to VA record only. The point this customization is at, within the VA Approval Workflow.
Action Date	Applicable to VA record only. The date of the last action taken on the record.
Export Date	For Approved or Deleted records. Indicates the date of the last Custom Update. See Export Date for additional information.
Action Effective Date	Applicable to VA record only. The date of the last action taken on the record.
Action Performed By	Applicable to VA record only. The name of the user that performed the last action.
Request Assigned To	Applicable to VA record only. A drop down list to assign an approver.
Request Submitted By	Applicable to VA record only. The name of the user that submitted this VA request.
Action Reason History	Applicable to VA record only. All historical current action reason comments for this record, in one viewable field.

Field Name	Field Description
Reference text	Field for the user to enter any reference text needed to support customization of the Duplicate Allowance.
Current Action Reason	Applicable to VA record only. Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.

11.8.2 Buttons

Print Page - Allows the user to print the page being viewed.

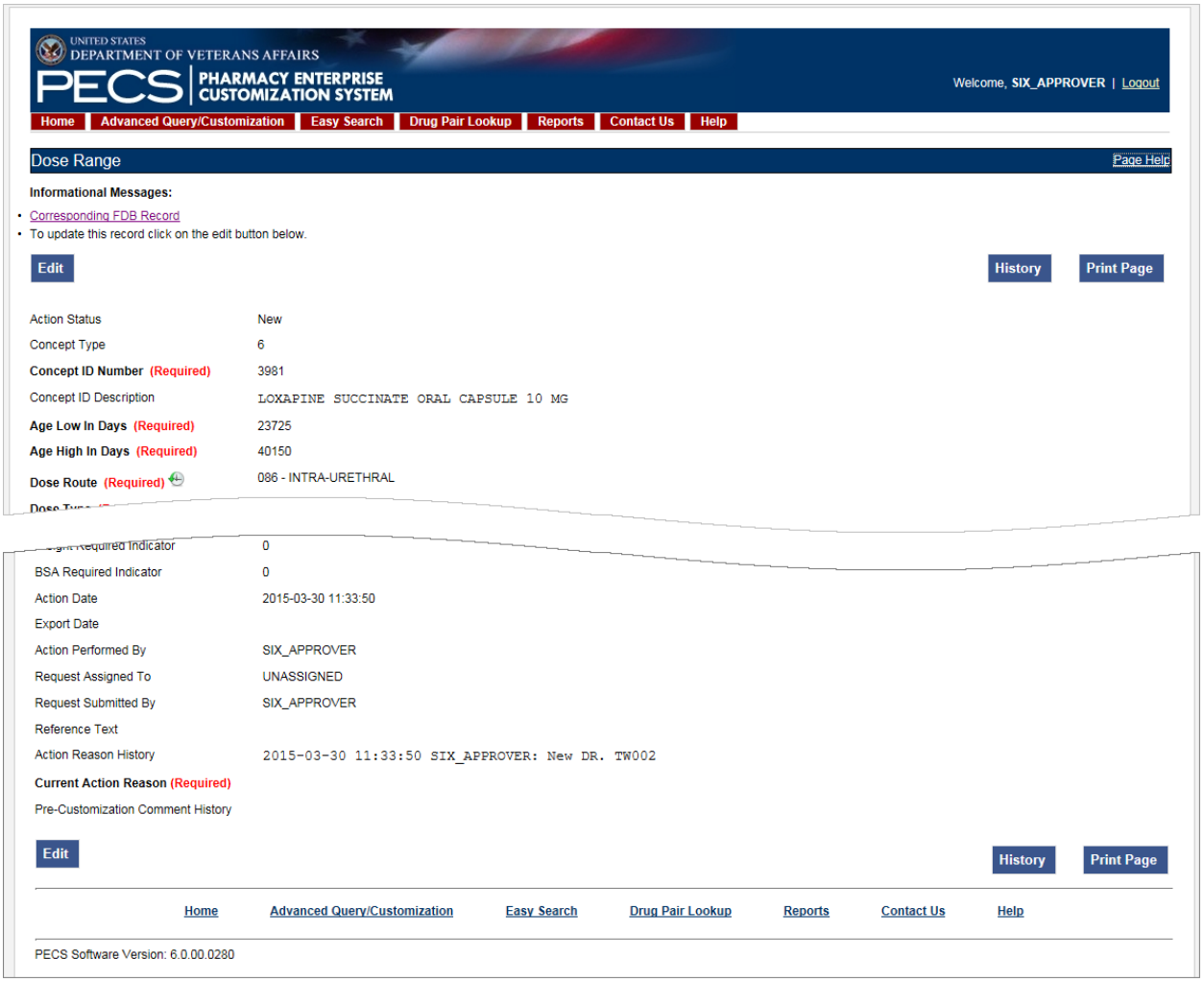
History - Allows the user to open the history of changes report.

Add Comment - Uncustomized FDB Records Only: Add a Pre-Customization comment to the FDB record.

11.9 Dose Range Detail

A Dose Range is the allowable dosage of a drug based on a number of factors such as patient age, weight, and Dose Route. The Dose Range Detail page allows you to view the details of a Dose Range record. If the FDB record is Concept Type 6 (Generic Dispensable Drug) you can customize it. For FDB records of concept type other than 6, the only action you can take is to add a comment. Once the FDB record has been customized, a link to the VA customized record (or records) will be provided. For VA records, a link to the original FDB record (if one exists) is provided as well as any additional customizations to the same FDB record.

Figure 107: Dose Range Detail, Top and Bottom



11.9.1 Dose Range Concept Types

FDB Dose Range records can be associated to different drug Concept Types (a type associated in the FDB drug database that PECS uses). However, only Concept Type 6 - Generic Dispensable Drug can be customized. The Concept Types are:

1 -- Drug Name
2 -- Routed Drug
3 -- Dispensable Drug
4 -- Generic Drug Name
5 -- Generic Routed Drug
6 -- Generic Dispensable Drug
7 -- Routed Dosage Form Drug
8 -- Generic Routed Dosage Form Drug
100 -- Packaged Drug
101 -- Manufactured Drug
102 -- Reference Only Item
103 -- Compound
104 -- Ingredient

105 -- Regional Packaged Drug
106 -- Total Parenteral Nutrition Solution

11.9.2 Fields

Table 18: Dose Range Detail Fields

Field	Description
Concept Type	Number identifying the drug's concept type (FDB dose range category)
Concept ID Number	Number identifying the drug (For Concept Type = 6, Concept ID number = GCNSEQ code - an FDB product code)
Concept ID Description	The name of the drug being described.
Action Status	Applicable to VA record only. The point this customization is at, within the VA Approval Workflow.
Age Low in Days	Lowest patient age in days to which dosing information applies
Age High in Days	Highest patient age in days to which dosing information applies
Action Effective Date	Applicable to VA record only. The date of the last action taken on the record.
Dose Route	Dose route
Dose Type	Dose type
FDBDX	A nine-character alphanumeric coding system developed by First DataBank that identifies specific disease states or side effects.
DXID	DXID type code to identify a Medical Condition
Dose Low	Minimum amount to be administered per day
Dose Low Units	Unit of measure for low dose per day
Dose High	Highest amount to be administered per day
Dose High Units	Unit of measure for high dose per day
Dose Form Low	Low dose for a given dose form
Dose Form Low Units	Unit of measure for the dose form
Dose Form High	High dose for a given dose form
Dose Form High Units	Unit of measure for the dose form
Frequency Low	Indicates the low end of a drug's frequency of administration per day
Frequency High	Indicates the high end of a drug's frequency of administration per day
Duration Low	Indicates the lowest recommended duration of therapy (in days)
Duration High	Indicates the highest recommended duration of therapy (in days)
Max Duration	Indicates the maximum recommended duration of therapy (in days)
Max Single Dose	Maximum amount to be administered in a single dose
Max Single Dose Units	Unit of measure for the maximum single dose
Max Single Dose Form	Maximum single dose for a given form
Max Single Dose Form Units	Unit of measure for the dose form
Max Daily Dose	Maximum amount to be administered per day
Max Daily Dose Units	Unit of measure for the maximum daily dose
Max Daily Dose Form	Maximum daily dose for a dose form

Field	Description
Max Daily Dose Form Units	Unit of measure for the dose form
Max Lifetime Dose	Maximum amount to be administered over a patient's lifetime, if available
Max Life Time Dose Units	Unit of measure for maximum lifetime dose
Max LifeTime Dose Form	Maximum lifetime dose for a given dose form
Max LifeTime Dose Form Units	Unit of measure for the dose form
Dose Rate Low	Minimum amount to be administered per dose rate (hours or minutes)
Dose Rate Low Units	Unit of measure for low dose rate (hours or minutes)
Dose Rate High	Highest amount to be administered per dose rate (hours or minutes)
Dose Rate High Units	Unit of measure for high dose rate (hours or minutes)
Dose Form Rate Low	Low dose for a given dose form rate (hours or minutes)
Dose Form Rate Low Units	Unit of measure for the dose form rate (hours or minutes)
Dose Form Rate High	High dose for a given dose form rate (hours or minutes)
Dose Form Rate High Units	Unit of measure for the dose form rate (hours or minutes)
Max Single Dose Rate	Maximum amount to be administered in a single dose rate (hours or minutes)
Max Single Dose Rate Units	Unit of measure for the maximum single dose rate (hours or minutes)
Max Single Dose Form Rate	Maximum single dose for a given dose form rate (hours or minutes)
Max Single Dose Form Rate Units	Unit of measure for the dose form rate (hours or minutes)
Max Daily Dose Rate	Maximum amount to be administered per dose rate (hours or minutes)
Max Daily Dose Rate Units	Unit of measure for the maximum daily dose rate (hours or minutes)
Max Daily Dose Form Rate	Maximum daily dose for a dose form rate (hours or minutes)
Max Daily Dose Form Rate Units	Unit of measure for the dose form rate (hours or minutes)
Hepatic Impairment IND	Boolean (0/1) indicating whether dosing needs to be adjusted for hepatic impairment
Renal Impairment IND	Boolean (0/1) indicating whether dosing needs to be adjusted for renal impairment
CRCL Threshold	Number indicating lowest creatinine clearance to which dosing applies
CRCL Threshold Units	Unit of measure for the creatinine clearance threshold
Low Elimination Half Life	Indicates the low end of the drug's half-life range
High Elimination Half Life	Indicates the high end of the drug's half-life range
Half Life Units	Unit of time for the half-life range of a drug

Field	Description
Weight Required IND	Boolean (0/1) indicating whether weight is required for dosing
BSA Required IND	Boolean (0/1) indicating whether body surface area is required for dosing
Request Submitted By	Applicable to VA record only. The name of the user that submitted this VA request.
Request Assigned To	Applicable to VA record only. A drop down list to assign an approver.
Action Performed By	Applicable to VA record only. The name of the user that performed the last action.
Action Date	Applicable to VA record only. The date of the last action taken on the record.
Export Date	For Approved or Deleted records. Indicates the date of the last Custom Update. See Export Date for additional information.
Reference Text	Applicable to VA record only. Field for the user to enter any reference text needed to support customization of this Dose Range.
Action Reason History	Applicable to VA record only. All historical 'current action reason' comments for this record, in one viewable field.
Current Action Reason	Applicable to VA record only Free form text that can be used to specify the reason for taking the specific action of creating new, modifying, assigning, rejecting, reviewing, approving, or deleting the customization.

11.9.3 Buttons

Print Page - Allows the user to print the page being viewed.

History - Allows the user to open the history of changes report.

Comment - Add a pre-customization comment (FDB Only)

(This page included for two-sided copying.)

12 Sample Modification Scenarios

The following scenarios are examples of the types of modifications a typical user may perform. It is not a step-by-step guide in instructing users how to perform actual modifications. Sample steps are given, but these could differ based on the customizations being modified.

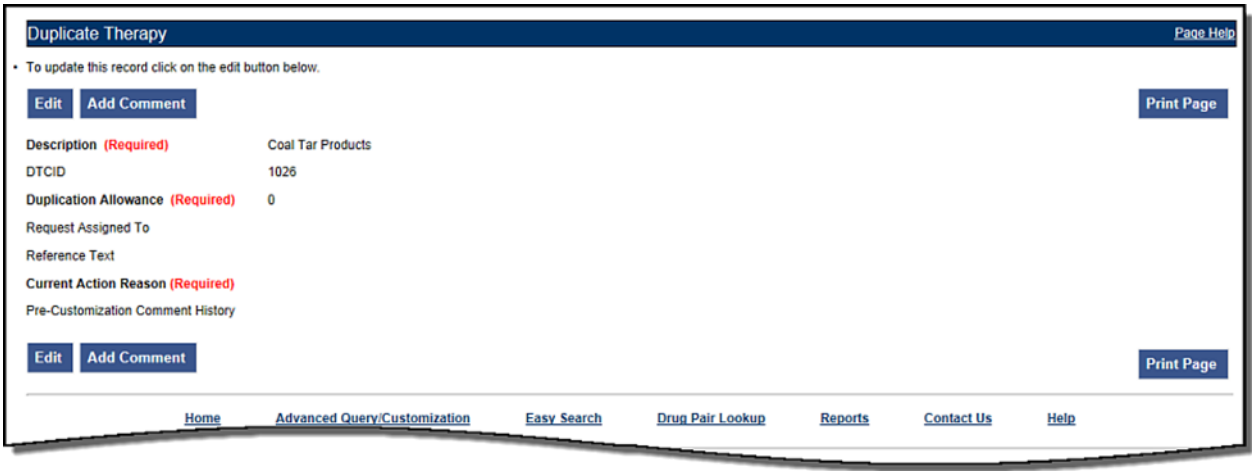
12.1 Duplicate Therapy Modification

Sample case: You are making a Duplicate Therapy customization for Topical Pine Tar.

12.1.1 Process Steps

Edit duplicate therapy allowance:

1. From the Home Page, click the Advanced Query/Customization tab.
2. Select "Duplicate Therapy" from the *Select a Concept* drop-down and select 'FDB' from the *Select VA, FDB, or Both* drop-down
3. Build the query as follows: Fields=Description; Filter=contains; Value=Tar.
4. Click the Query button.
5. Look at the query results at the bottom of the page.
6. Click the Open link for the desired class of drug.
7. You see the following:



8. Click the Edit button to edit the record.
9. Click the drop down arrow on Custom Dup Allowance (required) and select another number.
10. Enter a Description (required).
11. Enter the Current Action Reason (required).
12. Add any reference text you think is needed (optional).
13. Click the Customize button.

12.2 Duplicate Therapy Approval

Sample Case: After the duplication allowance has been edited for the above situation, you need to submit the request for approval. Assign this request to FOUR_APPROVER.

12.2.1 Process Steps

1. From the Home page, look at My Request History.
2. Click the link to the NEW Duplicate Therapy requests.
3. Look at the query results at the bottom of the page.
4. Click the link for the desired class of drug (Topical Pine Tar).
5. Review the information.
6. Click the Edit button to edit the record.
7. Select the next business reviewer's name in Request Assigned To (optional) field.
8. Indicate the action reason in Current Action Reason (optional) field.
9. Click the Submit As Reviewed button.

12.3 Drug Interaction Research

Sample Case: The chief of urology has been told by the Pfizer sales rep that the VA has no drug-drug interaction between Sildenafil and Tamsulosin. The chief insists that a significant (severity level 2) interaction be added to the system.

12.3.1 Process Steps for Severity Check, Case 1

Check severity of an existing drug-drug interaction.

1. From the Home page, click the Drug Pair Lookup tab.
2. Fill in known information (Drug A: Sildenafil; Drug B: Tamsulosin).
3. Click the Query button.
4. Review the VA custom records and FDB record.
5. Note existing VA custom interaction between Sildenafil and Tamsulosin with severity level 2 and FDB interaction with severity level 3.
6. No action needed.

12.4 Drug Interaction Severity Change

Sample Case: The FDA recently issued a black box warning stating that Cyclosporine and Tolterodine should never be used together due to risk of renal toxicity. This interaction is considered severity level 3 (moderate) by First Data Bank. Based on the issuance of this black box warning, the NDF support group is recommending the severity level be changed to 1 (critical). Create custom drug-drug pairs for this new VA custom drug-drug interaction.

12.4.1 Process Steps for Editing Case 1

Edit the severity of an existing FDB drug interaction

1. From Home page, choose the Advanced Query/Customization tab.
2. Select “Drug-Drug Interaction” from the *Select a Concept* drop-down and select ‘FDB’ from the *Select VA, FDB, or Both* drop-down.
3. Build the Query: Fields=Interaction Description; Filter=contains; Value=Cyclosporine; And/Or=Or.
4. Build Query: Column=Interaction Description; Constraints=contains; Value=Tolterodine.
5. Click the Query button.
6. Look at the query results at the bottom of the page.
7. Click the Open link for desired Interaction Description.
8. Click the Edit button to edit the record.
9. Click the drop down arrow on Severity Level Code (required).
10. Select the new desired severity level code (1).
11. Indicate the action reason in the free text Current Action Reason (required) field.
12. Click the Customize button.
13. Click Drug Pairs button.
14. Click the Edit button to edit the Drug Pairs.
15. If the section is not expanded, click the plus sign on Select Drug Pairs to add to the above VA Custom interaction bar.
16. If the radio button is not selected, click the radio button for “Drug Pairs from Corresponding FDB Interaction.”
17. Select desired drug pairs to add to the custom interaction.
18. Indicate the action reason in the free text Current Action Reason (required) field.
19. Click the Customize button.

To Submit as Reviewed:

1. From the home page, look at My Request History.
2. Click the NEW Drug-Drug Interactions link.
3. Look at the query results at the bottom of the page.
4. Click the link for the desired interaction description (Tolterodine/Cyclosporine).
5. Click the Drug Pairs button.
6. Click the Edit button.
7. Scroll down to Drug Pairs section, and select the newly added Drug Pair
8. Click the Submit as Reviewed button.
9. Click the link at the top of the page for the VA interaction
10. Click the Edit button.

11. Review the information.
12. Indicate the Action Reason in the free text Current Action Reason (required) field.
13. Click the Submit as Reviewed button.

12.5 Drug Interaction Severity Change

Sample Case: Over the past six months, several local VA facilities have reported adverse reactions (ADRs) involving the use of Digoxin and Metoclopramide resulting in Digoxin toxicity requiring hospital admissions for management. This interaction is classified as severity level 3 (moderate) by FDB and therefore does not create an alert in the physician order entry process. The NDF support group has approved the change of the severity level from 3 to 2 (severe) to provide for order alerts and has assigned you to perform this task. Create custom drug-drug pairs for this new VA custom drug-drug interaction. Then submit the new interaction and drug pairs as reviewed.

12.5.1 Process Steps for Editing Case 2

Edit the severity of an existing FDB drug interaction

1. From the Home page, choose the Advanced Query/Customization tab.
2. Select “Drug-Drug Interaction” from the Select a Concept drop-down and select ‘FDB’ from the Select VA, FDB, or Both drop-down.
3. Build the Query: Fields=Interaction Description; Filter=contains; Value=Digoxin; And/Or=And.
4. Build the Query: Fields=Interaction Description; Filter=contains; Value=Metoclopramide.
5. Click the Query button.
6. Look at the query results at the bottom of the page.
7. Click the Active link for the desired Interaction Description.
8. Click the Edit button.
9. Click the drop down arrow on Severity Level Code (required).
10. Select the desired new severity level code (2).
11. Indicate the action reason in the free text Current Action Reason (required) field.
12. Click the Customize button.
13. Click Drug Pairs button.
14. Click the Edit button.
15. If the section is not expanded, click the plus sign on Select Drug Pairs to add to the above VA Custom interaction bar.
16. If the radio button is not selected, click the radio button for ‘drug pairs from corresponding FDB interaction.’
17. Click the checkbox for ‘Select/Deselect all drug Pairs from corresponding FDB interaction.’
18. Indicate the action reason in the free text Current Action Reason (required) box
19. Click the Customize button.
20. From the Home page, look at My Request History.

21. Click the NEW Drug-Drug Interactions link.
22. Look at the query results at the bottom of the page.
23. Click on the Active link for the desired interaction description (digoxin/metoclopramide).
24. Click Drug Pairs button (Drug pairs should be submitted as reviewed prior to submitting the interaction for review)
25. Scroll to the Drug Pairs Bar
26. Click the Edit button
27. Click the checkbox for 'Select/Deselect All Drug Pairs Displayed from VA Custom Interaction'
28. Click the Submit as Reviewed button.
29. Click on the VA Interaction ID at top of page to navigate to Drug Interaction Detail page
30. Click the Submit as Reviewed button.

12.6 Remove Drug Pair from Interaction

Sample Case: You have been asked to remove the drug pair Sumatriptan Nasal/Tranylcypromine Sulfate Oral from the existing VA custom drug-drug interaction Selected 5HT-1D Agonists/MAO Inhibitors.

12.6.1 Process Steps

Remove or add a drug pair from an existing VA custom drug-drug interaction.

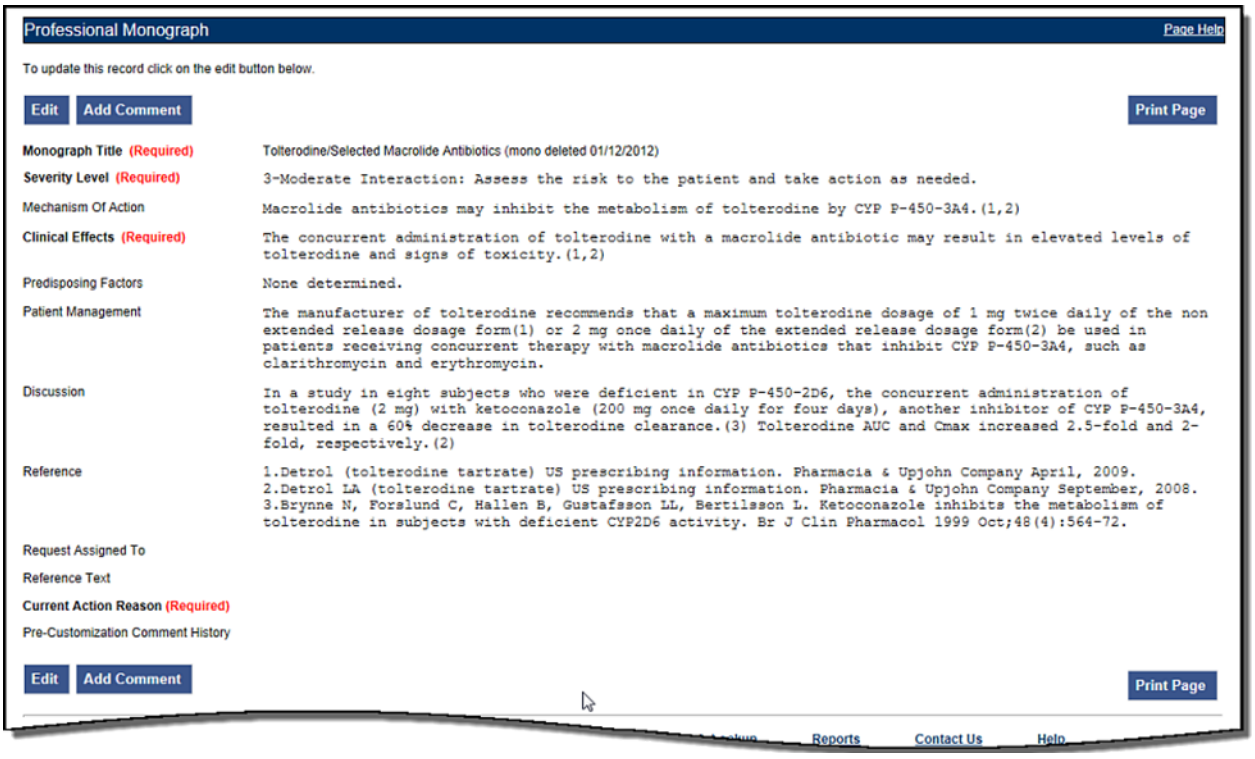
1. Choose the Advanced Query/Customization tab.
2. Select "Drug-Drug Interaction" from the Select a Concept drop-down and select 'VA' from the Select VA, FDB, or Both drop-down.
3. Build the Query: Column=Interaction Description; Filter=contains; Value=Selected 5HT.
4. Click the Query button.
5. Look at the query results at the bottom of the page.
6. Select the Active link for the desired Interaction Description.
7. Click the Edit button.
8. Click the Drug Pairs button.
9. Click the Edit button to edit the drug pairs.
10. Click the plus sign on 'Drug Pairs' bar.
11. Click on the checkbox associated with Sumatriptan Nasal and Tranylcypromine Sulfate Oral.
12. Click the Submit for Delete button.
13. Alert another Approver that the drug pair needs to be deleted.

12.7 Create Professional Monograph

Sample Case: Create a new VA custom monograph using the current FDB interaction monograph created for Cyclosporine and Tolterodine as the guide. Modify the FDB monograph severity level from level 3 to level 1 – contraindication.

12.7.1 Process Steps

1. Choose the Advanced Query/Customization tab.
2. Select “Professional Monograph” from the Select a Concept drop-down and select ‘FDB’ from the Select VA, FDB, or Both drop-down.
3. Build the Query: Column=Monograph Title; Filter=contains; Value=cyclosporine.
4. Select OR from the And/Or drop-down.
5. Build the Query: Column=Monograph Title; Filter=contains; Value=tolterodine.
6. Click the Query button.
7. Look at the results at the bottom of the page.
8. Click the link for the desired monograph title in the FDB table results. The Monograph is displayed, as shown.



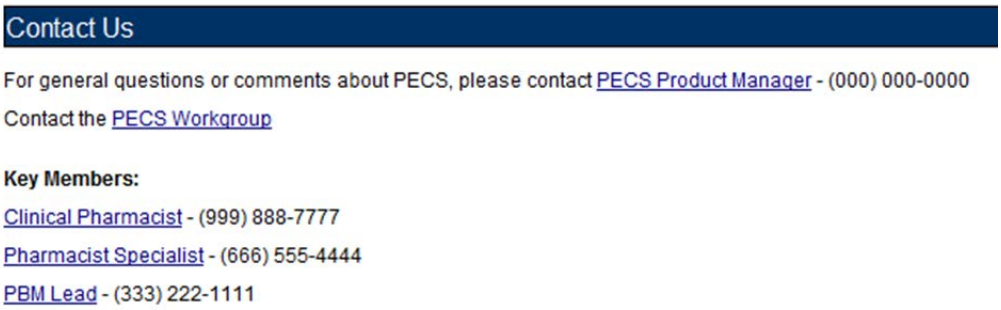
9. Click the Edit button to edit the record.
10. Change the Severity level to 1 – Critical.
11. Indicate the action reason in the free text Current Action Reason (required) field.
12. Click the Customize button.

13 Contact Us

The Contact Us page contains a list of PECS Project Contacts should you need additional information about the PECS product. The content of the Contact Us page is created and maintained by users with the Administrator role. In many cases, a linked email address will be included; Click the link associated with the name to send that person (or group) an email.

Note:	Clicking the link opens your mail application and a new email message to the person specified in the properties of the link. This may produce a warning message. This is normal.

Figure 108: Contact Us Example



PECS Administrators can edit the content of the Contact Us page. See Editing Contact Us for additional information.

(This page included for two-sided copying.)

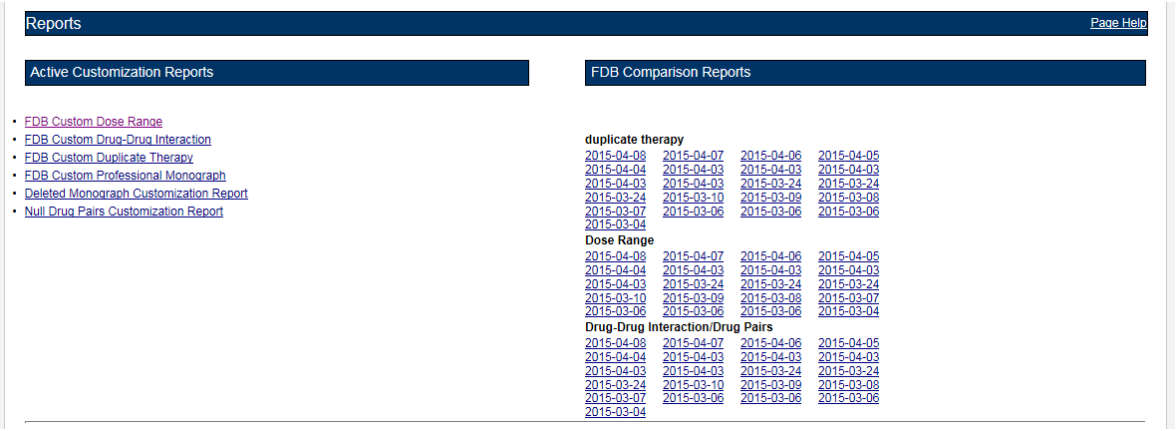
14 Reports

The Reports page displays a list of available reports in PECS. PECS Reports are essentially exported Excel spreadsheets that can be manipulated and formatted as the user sees fit.

> **Note**: The Reports tab is not visible to Requestor or Release Manager users.
>
> **Note to Assistive Technology Users**: Please refer the documentation included with your screen reader for commands related to reading column and row headers.

To run a report, click the link associated with it. You will be provided the option of opening the file directly or saving it to copy of the file to a location on your workstation (or accessible network location).

Figure 109: List of Reports



There are two types of Reports:

- Active Customization Reports
- FDB Comparison Reports

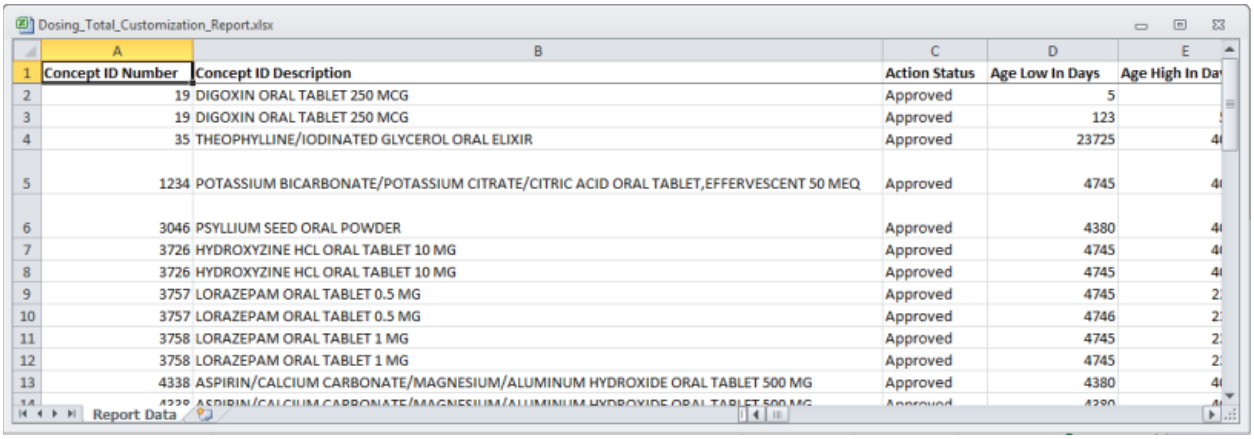
14.1 Active Customization Reports

The Active Customization Reports are:

- FDB Custom Dose Range Report
- FDB Custom Drug-Drug Interaction Report
- FDB Custom Duplicate Therapy Report
- FDB Custom Professional Monograph Report
- Deleted Monograph Customization Report
- Null Drug Pairs Customization Report

The first four Active Customization Reports, FDB Custom Dose Range, FDB Custom Drug-Drug Interaction, FDB Custom Duplicate Therapy, and FDB Custom Professional Monograph, display concept records in an Approved status along with their corresponding FDB record data. See the sample below.

Figure 110: Sample Active Customization Report



Dosing_Total_Customization_Report.xlsx

	A	B	C	D	E
1	Concept ID Number	Concept ID Description	Action Status	Age Low In Days	Age High In Da
2	19	DIGOXIN ORAL TABLET 250 MCG	Approved	5	
3	19	DIGOXIN ORAL TABLET 250 MCG	Approved	123	
4	35	THEOPHYLLINE/IODINATED GLYCEROL ORAL ELIXIR	Approved	23725	
5	1234	POTASSIUM BICARBONATE/POTASSIUM CITRATE/CITRIC ACID ORAL TABLET,EFFERVESCENT 50 MEQ	Approved	4745	
6	3046	PSYLLIUM SEED ORAL POWDER	Approved	4380	
7	3726	HYDROXYZINE HCL ORAL TABLET 10 MG	Approved	4745	
8	3726	HYDROXYZINE HCL ORAL TABLET 10 MG	Approved	4745	
9	3757	LORAZEPAM ORAL TABLET 0.5 MG	Approved	4745	
10	3757	LORAZEPAM ORAL TABLET 0.5 MG	Approved	4746	
11	3758	LORAZEPAM ORAL TABLET 1 MG	Approved	4745	
12	3758	LORAZEPAM ORAL TABLET 1 MG	Approved	4745	
13	4338	ASPIRIN/CALCIUM CARBONATE/MAGNESIUM/ALUMINUM HYDROXIDE ORAL TABLET 500 MG	Approved	4380	

Report Data

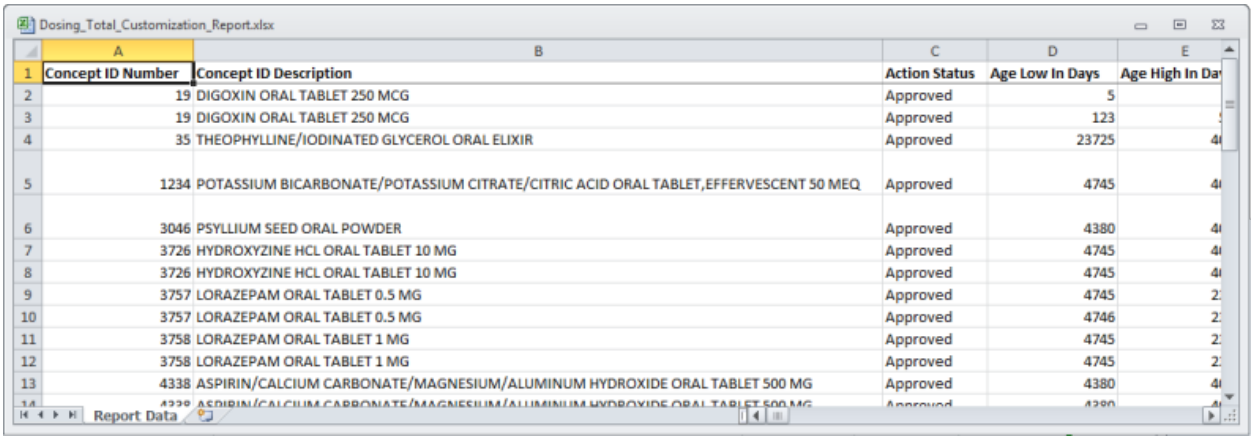
The last two reports on the list, Deleted Monograph Customization Report and Null Drug Pairs Customization Report, look for problems. The Deleted Monograph Customization Report displays DDIs with an associated PM that has been deleted (e.g., the FDB update deleted an FDB PM, and that FDB PM is associated to a custom DDI). The Null Drug Pairs Customization Report displays custom DDIs that have an associated DP in which one or both routed generics is null because an FDB update deleted the routed generic(s).

14.1.1 FDB Custom Dose Range Report

The FDB Custom Dose Range Report contains active VA custom Dose Range records in an Approved status. The default file name is Dosing_Total_Customization_Report.xlsx.

To Run the FDB Custom Dose Range Report

1. Click the Reports tab on the PECS Application Window.
2. Click the FDB Custom Dose Range Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). The file name is Dosing_Total_Customization_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.



Dosing_Total_Customization_Report.xlsx

	A	B	C	D	E
1	Concept ID Number	Concept ID Description	Action Status	Age Low In Days	Age High In Da
2	19	DIGOXIN ORAL TABLET 250 MCG	Approved	5	
3	19	DIGOXIN ORAL TABLET 250 MCG	Approved	123	
4	35	THEOPHYLLINE/IODINATED GLYCEROL ORAL ELIXIR	Approved	23725	
5	1234	POTASSIUM BICARBONATE/POTASSIUM CITRATE/CITRIC ACID ORAL TABLET,EFFERVESCENT 50 MEQ	Approved	4745	
6	3046	PSYLLIUM SEED ORAL POWDER	Approved	4380	
7	3726	HYDROXYZINE HCL ORAL TABLET 10 MG	Approved	4745	
8	3726	HYDROXYZINE HCL ORAL TABLET 10 MG	Approved	4745	
9	3757	LORAZEPAM ORAL TABLET 0.5 MG	Approved	4745	
10	3757	LORAZEPAM ORAL TABLET 0.5 MG	Approved	4746	
11	3758	LORAZEPAM ORAL TABLET 1 MG	Approved	4745	
12	3758	LORAZEPAM ORAL TABLET 1 MG	Approved	4745	
13	4338	ASPIRIN/CALCIUM CARBONATE/MAGNESIUM/ALUMINUM HYDROXIDE ORAL TABLET 500 MG	Approved	4380	

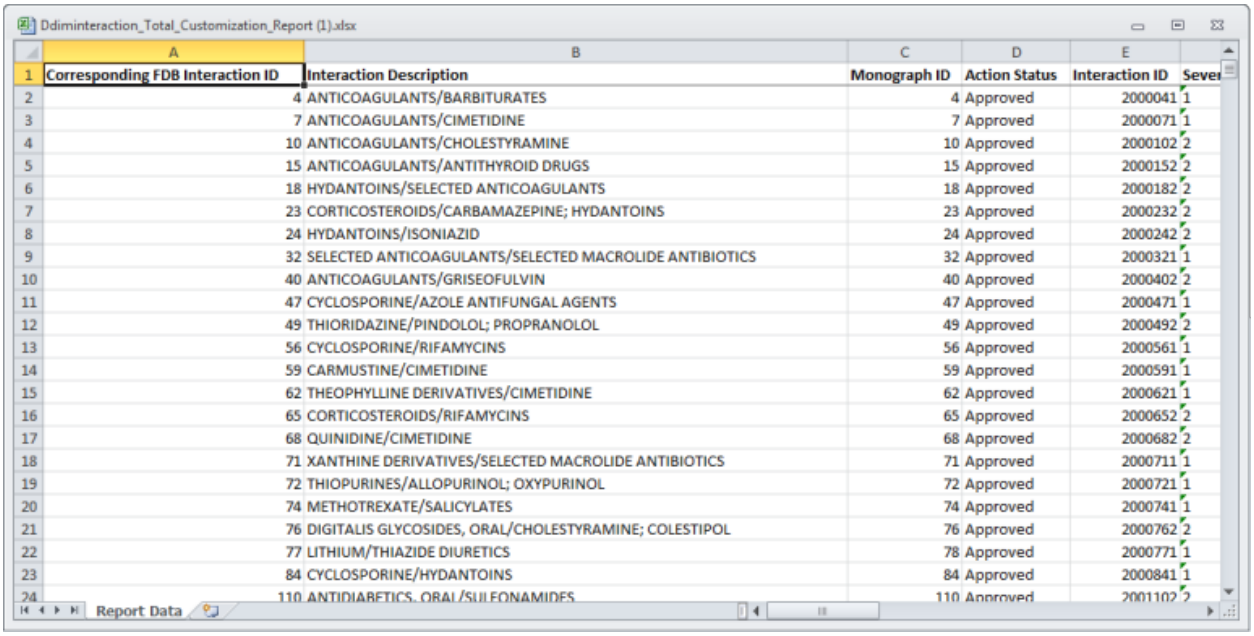
Report Data

14.1.2 FDB Custom Drug-Drug Interaction Report

The FDB Custom Drug-Drug Interaction Report contains active VA custom Drug-Drug interaction records in an Approved status along with their corresponding FDB record data.

To Run the FDB Custom Drug-Drug Interaction Report

1. Click the Reports tab on the PECS Application Window.
2. Click the FDB Custom Drug-Drug Interaction Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). The file name is Ddiminteraction_Total_Customization_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.



Ddiminteraction_Total_Customization_Report (1).xlsx

	A	B	C	D	E	
1	Corresponding FDB Interaction ID	Interaction Description	Monograph ID	Action Status	Interaction ID	Sever
2	4	ANTICOAGULANTS/BARBITURATES	4	Approved	2000041	1
3	7	ANTICOAGULANTS/CIMETIDINE	7	Approved	2000071	1
4	10	ANTICOAGULANTS/CHOLESTYRAMINE	10	Approved	2000102	2
5	15	ANTICOAGULANTS/ANTITHYROID DRUGS	15	Approved	2000152	2
6	18	HYDANTOINS/SELECTED ANTICOAGULANTS	18	Approved	2000182	2
7	23	CORTICOSTEROIDS/CARBAMAZEPINE; HYDANTOINS	23	Approved	2000232	2
8	24	HYDANTOINS/ISONIAZID	24	Approved	2000242	2
9	32	SELECTED ANTICOAGULANTS/SELECTED MACROLIDE ANTIBIOTICS	32	Approved	2000321	1
10	40	ANTICOAGULANTS/GRISEOFULVIN	40	Approved	2000402	2
11	47	CYCLOSPORINE/AZOLE ANTIFUNGAL AGENTS	47	Approved	2000471	1
12	49	THIORIDAZINE/PINDOLOL; PROPRANOLOL	49	Approved	2000492	2
13	56	CYCLOSPORINE/RIFAMYCINS	56	Approved	2000561	1
14	59	CARMUSTINE/CIMETIDINE	59	Approved	2000591	1
15	62	THEOPHYLLINE DERIVATIVES/CIMETIDINE	62	Approved	2000621	1
16	65	CORTICOSTEROIDS/RIFAMYCINS	65	Approved	2000652	2
17	68	QUINIDINE/CIMETIDINE	68	Approved	2000682	2
18	71	XANTHINE DERIVATIVES/SELECTED MACROLIDE ANTIBIOTICS	71	Approved	2000711	1
19	72	THIOPURINES/ALLOPURINOL; OXYPURINOL	72	Approved	2000721	1
20	74	METHOTREXATE/SALICYLATES	74	Approved	2000741	1
21	76	DIGITALIS GLYCOSIDES, ORAL/CHOLESTYRAMINE; COLESTIPOL	76	Approved	2000762	2
22	77	LITHIUM/THIAZIDE DIURETICS	78	Approved	2000771	1
23	84	CYCLOSPORINE/HYDANTOINS	84	Approved	2000841	1
24	110	ANTIDIABETICS, ORAL/SULFONAMIDES	110	Approved	2001102	2

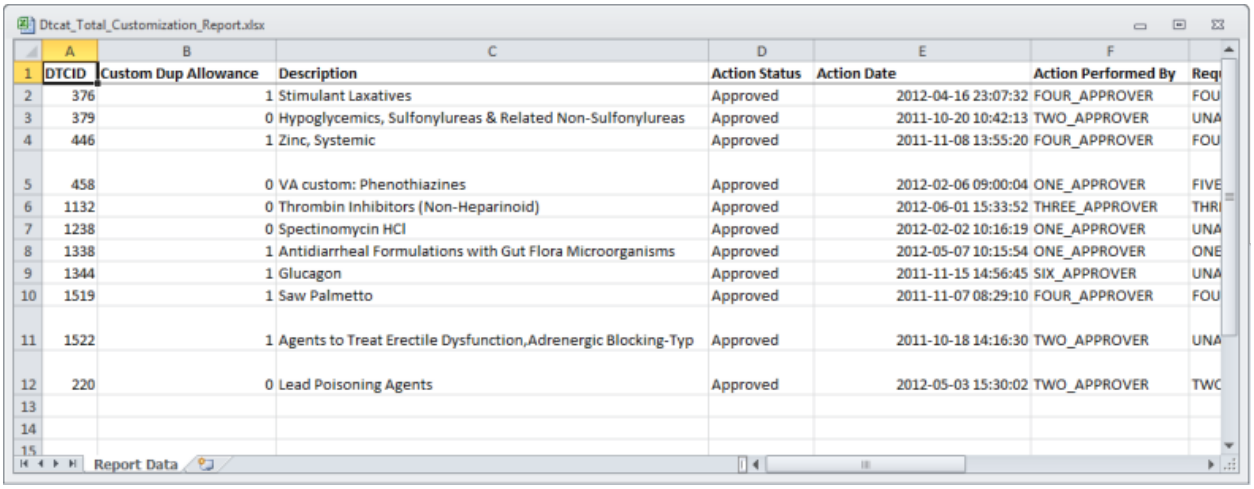
Report Data

14.1.3 FDB Custom Duplicate Therapy Report

The FDB Custom Duplicate Therapy Report contains active VA custom Duplicate Therapy records in an Approved status along with their corresponding FDB record data.

To run the FDB Custom Duplicate Therapy Report

1. Click the Reports tab on the PECS Application Window.
2. Click the FDB Custom Duplicate Therapy Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). By default, the file name is Dtcat_Total_Customization_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.



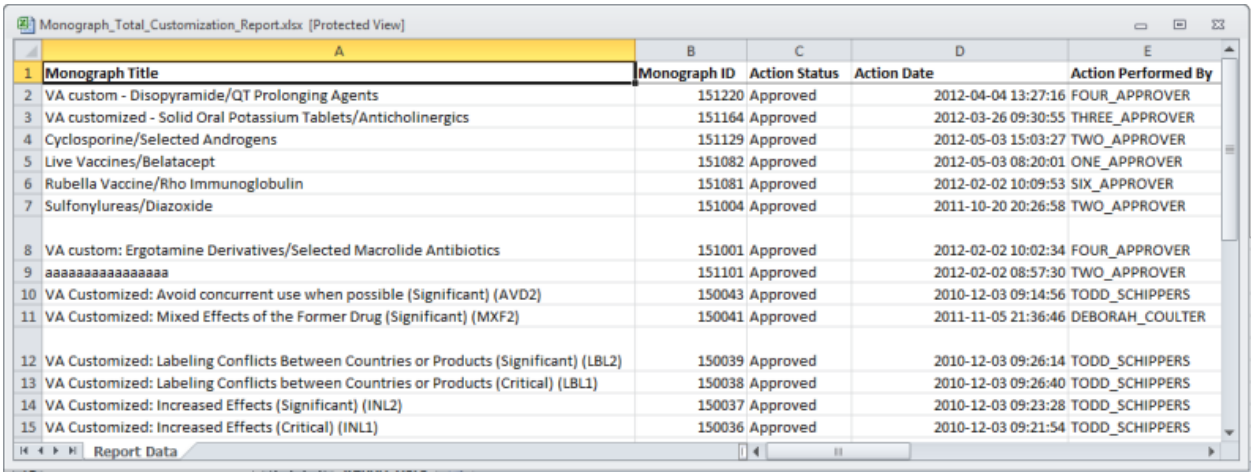
DTCID	Custom Dup Allowance	Description	Action Status	Action Date	Action Performed By	Req
376	1	Stimulant Laxatives	Approved	2012-04-16 23:07:32	FOUR_APPROVER	FOU
379	0	Hypoglycemics, Sulfonylureas & Related Non-Sulfonylureas	Approved	2011-10-20 10:42:13	TWO_APPROVER	UNA
446	1	Zinc, Systemic	Approved	2011-11-08 13:55:20	FOUR_APPROVER	FOU
458	0	VA custom: Phenothiazines	Approved	2012-02-06 09:00:04	ONE_APPROVER	FIVE
1132	0	Thrombin Inhibitors (Non-Heparinoid)	Approved	2012-06-01 15:33:52	THREE_APPROVER	THR
1238	0	Spectinomycin HCl	Approved	2012-02-02 10:16:19	ONE_APPROVER	UNA
1338	1	Antidiarrheal Formulations with Gut Flora Microorganisms	Approved	2012-05-07 10:15:54	ONE_APPROVER	ONE
1344	1	Glucagon	Approved	2011-11-15 14:56:45	SIX_APPROVER	UNA
1519	1	Saw Palmetto	Approved	2011-11-07 08:29:10	FOUR_APPROVER	FOU
1522	1	Agents to Treat Erectile Dysfunction,Adrenergic Blocking-Typ	Approved	2011-10-18 14:16:30	TWO_APPROVER	UNA
220	0	Lead Poisoning Agents	Approved	2012-05-03 15:30:02	TWO_APPROVER	TWO

14.1.4 FDB Custom Professional Monograph Report

The FDB Custom Professional Monograph Report contains active VA custom Professional Monograph records in an Approved status along with their corresponding FDB record data.

To run the FDB Custom Professional Monograph Report

1. Click the Reports tab on the PECS Application Window.
2. Click the FDB Custom Professional Monograph Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). By default, the file name is Monograph_Total_Customization_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.


Monograph_Total_Customization_Report.xlsx [Protected View]

	A	B	C	D	E
1	Monograph Title	Monograph ID	Action Status	Action Date	Action Performed By
2	VA custom - Disopyramide/QT Prolonging Agents	151220	Approved	2012-04-04 13:27:16	FOUR_APPROVER
3	VA customized - Solid Oral Potassium Tablets/Anticholinergics	151164	Approved	2012-03-26 09:30:55	THREE_APPROVER
4	Cyclosporine/Selected Androgens	151129	Approved	2012-05-03 15:03:27	TWO_APPROVER
5	Live Vaccines/Belatacept	151082	Approved	2012-05-03 08:20:01	ONE_APPROVER
6	Rubella Vaccine/Rho Immunoglobulin	151081	Approved	2012-02-02 10:09:53	SIX_APPROVER
7	Sulfonylureas/Diazoxide	151004	Approved	2011-10-20 20:26:58	TWO_APPROVER
8	VA custom: Ergotamine Derivatives/Selected Macrolide Antibiotics	151001	Approved	2012-02-02 10:02:34	FOUR_APPROVER
9	aaaaaaaaaaaaaaa	151101	Approved	2012-02-02 08:57:30	TWO_APPROVER
10	VA Customized: Avoid concurrent use when possible (Significant) (AVD2)	150043	Approved	2010-12-03 09:14:56	TODD_SCHIPPERS
11	VA Customized: Mixed Effects of the Former Drug (Significant) (MXF2)	150041	Approved	2011-11-05 21:36:46	DEBORAH_COULTER
12	VA Customized: Labeling Conflicts Between Countries or Products (Significant) (LBL2)	150039	Approved	2010-12-03 09:26:14	TODD_SCHIPPERS
13	VA Customized: Labeling Conflicts between Countries or Products (Critical) (LBL1)	150038	Approved	2010-12-03 09:26:40	TODD_SCHIPPERS
14	VA Customized: Increased Effects (Significant) (INL2)	150037	Approved	2010-12-03 09:23:28	TODD_SCHIPPERS
15	VA Customized: Increased Effects (Critical) (INL1)	150036	Approved	2010-12-03 09:21:54	TODD_SCHIPPERS

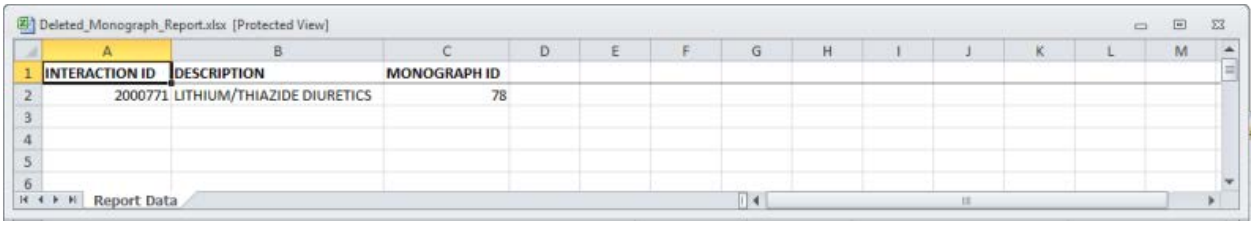
Report Data

14.1.5 Deleted Monograph Customization Report

The Deleted Monograph Customization Report contains active VA custom Drug-Drug interaction records in an Approved status that are associated with a deleted FDB Professional Monograph.

To run the Deleted Monograph Customization Report

1. Click the Reports tab on the PECS Application Window.
2. Click the Deleted Monograph Customization Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). By default, the file name is Deleted_Monograph_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.


Deleted_Monograph_Report.xlsx [Protected View]

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	INTERACTION ID	DESCRIPTION	MONOGRAPH ID										
2	2000771	LITHIUM/THIAZIDE DIURETICS	78										
3													
4													
5													
6													

Report Data

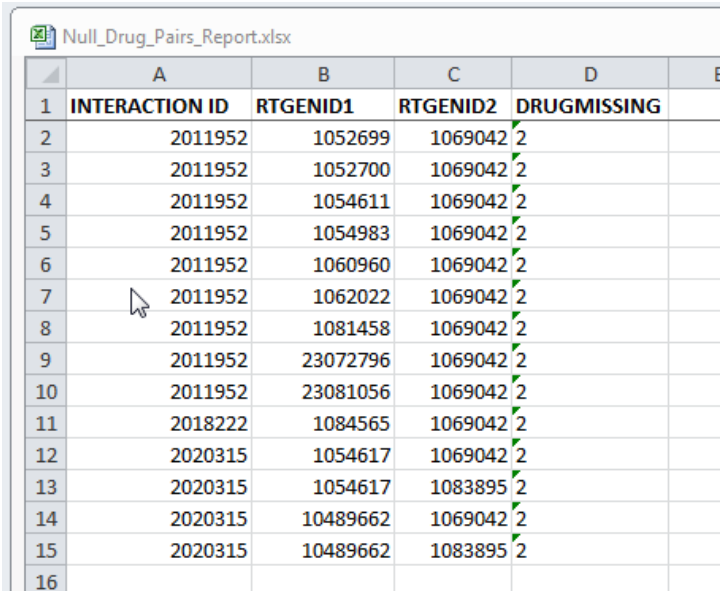
14.1.6 Null Drug Pairs Customization Report

The Null Drug Pairs Customization Report contains approved VA custom Drug-Drug Interactions that contain Drug Pairs with null Routed Generic #1 or Routed Generic #2 fields. The report will not display drug pairs with Deleted status.

If this report contains any entries, a user in the Administrator role should initiate the Null Drug Pair Removal Process, which deletes Null Drug Pairs listed on the report. After the Null Drug Pair Removal process is complete, the Administrator may want to run the report to verify that these drug pairs have been removed. The null Drug Pairs listed on this report are the ones that will be deleted during the Null Drug Pair Removal process.

To run the Null Drug Pairs Customization Report

1. Click the Reports tab on the PECS Application Window.
2. Click the Null Drug Pairs Customization Report link.
3. Select Open to view the exported file in Excel; select Save to save a copy of the file to a location on your workstation (or accessible network location). By default, the file name is Deleted_Monograph_Report.xlsx.
4. If you selected Open, the report will automatically appear in the Excel application.


Null_Drug_Pairs_Report.xlsx

	A	B	C	D
1	INTERACTION ID	RTGENID1	RTGENID2	DRUGMISSING
2	2011952	1052699	1069042	2
3	2011952	1052700	1069042	2
4	2011952	1054611	1069042	2
5	2011952	1054983	1069042	2
6	2011952	1060960	1069042	2
7	2011952	1062022	1069042	2
8	2011952	1081458	1069042	2
9	2011952	23072796	1069042	2
10	2011952	23081056	1069042	2
11	2018222	1084565	1069042	2
12	2020315	1054617	1069042	2
13	2020315	1054617	1083895	2
14	2020315	10489662	1069042	2
15	2020315	10489662	1083895	2
16				

Note: This report can be used to identify approved VA Drug-Drug Interactions that contain null Drug Pairs.

For more information, see the section Null Drug Pair Removal Process under Administrator.

14.2 FDB Comparison Reports

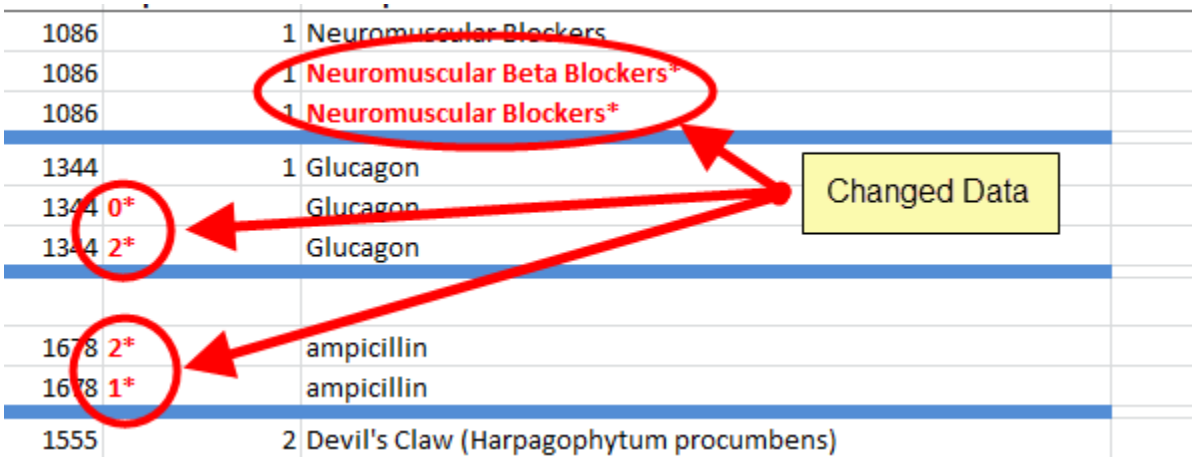
The FDB Comparison Reports display the changes to existing data included in the Incremental FDB updates. The reports inform an Approver or Administrator of the latest FDB changes for the Duplicate Therapy, Drug-Drug Interaction, Drug Pair, and Dose Range concepts and provide data that helps the these users decide whether or not to change a custom record. The FDB Comparison Reports help an Approver or Administrator keep PECS customizations in sync with FDB changes.

FDB Comparison Reports display:

- Customized records in all action statuses that have differences between the PECS FDB data and the data in the Incremental FDB Update file.
- Un-customized records that have differences between the PECS FDB data and the data in the Incremental FDB Update file.
- Indications that an FDB record is scheduled to be deleted by DATUP.
- Lists of the drug pairs that will be added or deleted by DATUP.
- A "no data found" message if the Incremental FDB Update file has no changes to the FDB data.

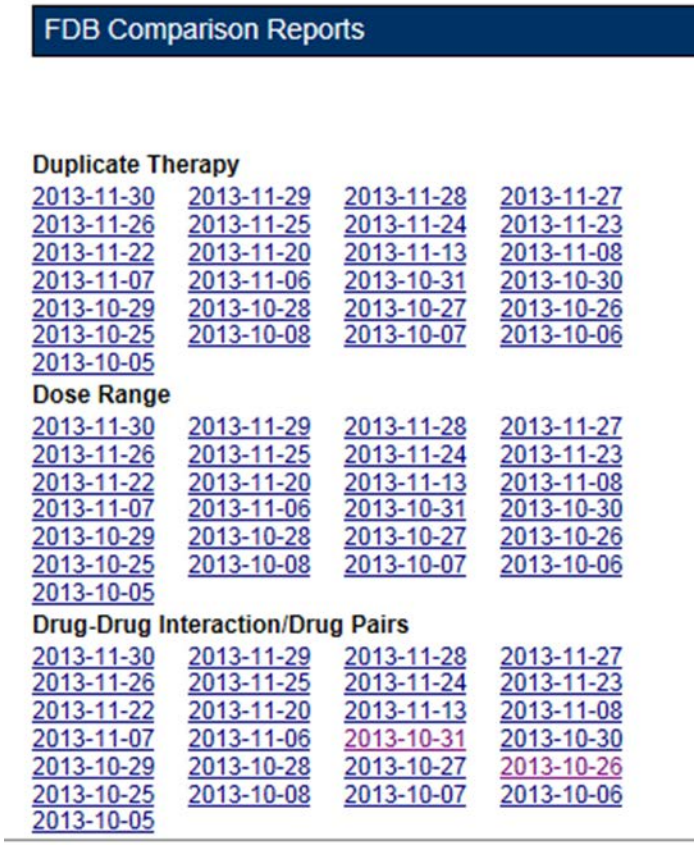
Changed data is marked with an asterisk (*) and colored red. The reports are organized by type and the date of the FDB Incremental Update.

Figure 111: Changed Data in Report



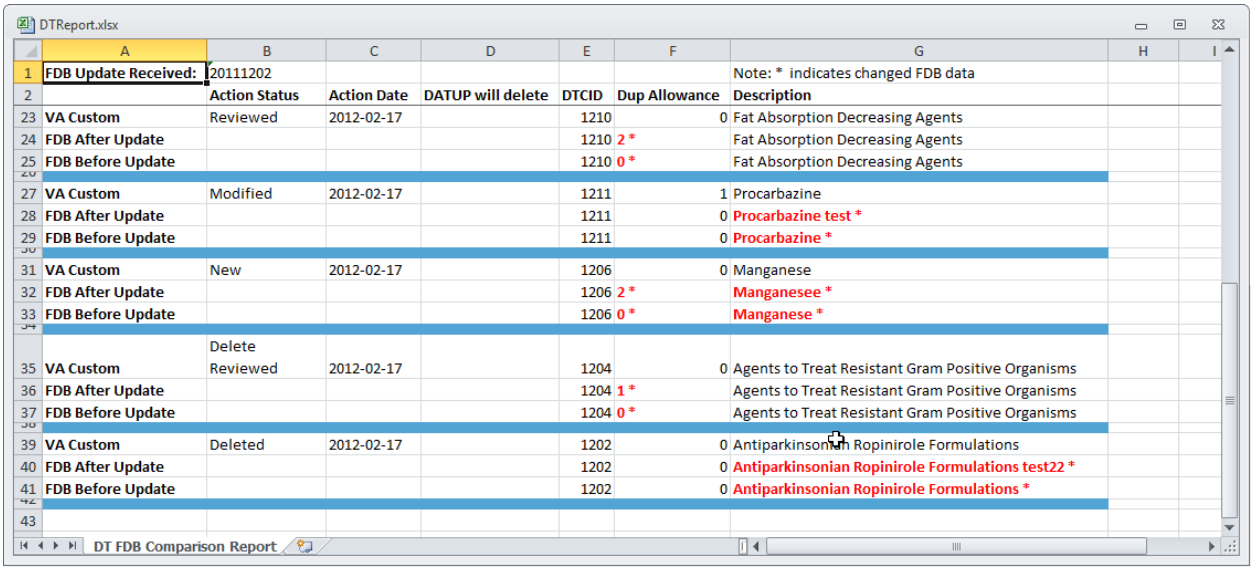
To run an FDB Comparison report, click the appropriate date of an FDB Incremental Update under the appropriate Report Heading:

Figure 112: FDB Incremental Update Date Samples



14.2.1 Structure of the FDB Comparison Report

Figure 113: Sample FDB Comparison Report - Duplicate Therapy



DTReport.xlsx

	A	B	C	D	E	F	G
1	FDB Update Received:	20111202					Note: * indicates changed FDB data
2		Action Status	Action Date	DATUP will delete	DTCID	Dup Allowance	Description
23	VA Custom	Reviewed	2012-02-17		1210	0	Fat Absorption Decreasing Agents
24	FDB After Update				1210	2 *	Fat Absorption Decreasing Agents
25	FDB Before Update				1210	0 *	Fat Absorption Decreasing Agents
27	VA Custom	Modified	2012-02-17		1211	1	Procarbazine
28	FDB After Update				1211	0	Procarbazine test *
29	FDB Before Update				1211	0	Procarbazine *
31	VA Custom	New	2012-02-17		1206	0	Manganese
32	FDB After Update				1206	2 *	Manganesee *
33	FDB Before Update				1206	0 *	Manganese *
		Delete					
35	VA Custom	Reviewed	2012-02-17		1204	0	Agents to Treat Resistant Gram Positive Organisms
36	FDB After Update				1204	1 *	Agents to Treat Resistant Gram Positive Organisms
37	FDB Before Update				1204	0 *	Agents to Treat Resistant Gram Positive Organisms
39	VA Custom	Deleted	2012-02-17		1202	0	Antiparkinsonian Ropinirole Formulations
40	FDB After Update				1202	0	Antiparkinsonian Ropinirole Formulations test22 *
41	FDB Before Update				1202	0	Antiparkinsonian Ropinirole Formulations *
43							

DT FDB Comparison Report

Each FDB Comparison Report lists the "FDB Update Received" date, which is the date listed in the Incremental FDB Update file.

Each report lists comparison sets of VA and FDB data. Each comparison set consists of at least three rows separated by a blue line. The three rows are:

Table 19: FDB Comparison Report Row Fields

Row Name	Row Description
VA Custom	Data in the Custom VA record. If the corresponding FDB record has not been customized, a "Not customized" message will be in the Action Status column and the rest of the row will be blank.
FDB After Update	Data in the Incremental FDB Update File. This data will be in the PECS database shortly after the incremental FDB update is done via DATUP.
FDB Before Update	Data in the PECS FDB record. This data will be replaced by the 'FDB After Update' data. If the FDB After Update and FDB Before Update data of the same type are different, they are marked with an asterisk (*) and colored red. Records that do not have any differences between the FDB Before Update and FDB After Update data of the same type are not listed in the report.

Each FDB Comparison Report has the following columns:

Table 20: FDB Comparison Report Statuses

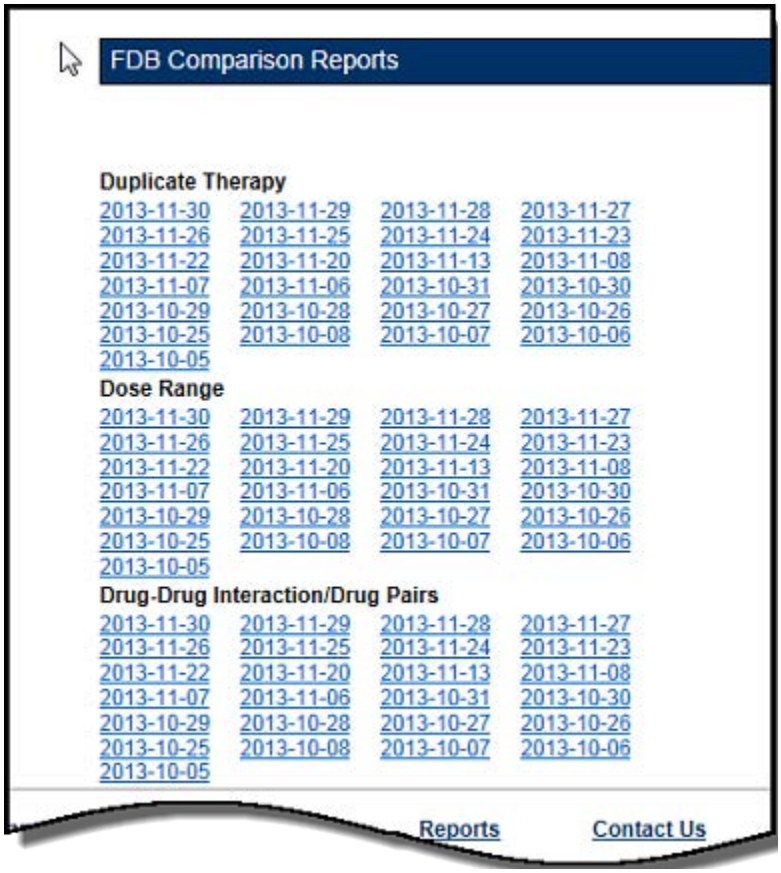
Column Name	Column Description
Action Status	The state of the associated VA record based on the most recent action performed. PECS compares FDB data with VA customizations in any Action Status, including Rejected or Deleted.
Action Date	The date the current action (Action Status) was taken.

Column Name	Column Description
DATUP will delete	YES in this column Indicates the associated FDB record will be deleted by DATUP. If the column is blank, the associated FDB record will not be deleted by DATUP. If the FDB record will be deleted by DATUP, only the FDB Interaction ID and DATUP will delete columns will be filled out in the FDB After Update row. All the other columns will be blank.

The reports are organized by type and the date of the FDB Incremental Update. Links to the reports are kept for eight weeks on the Reports page.

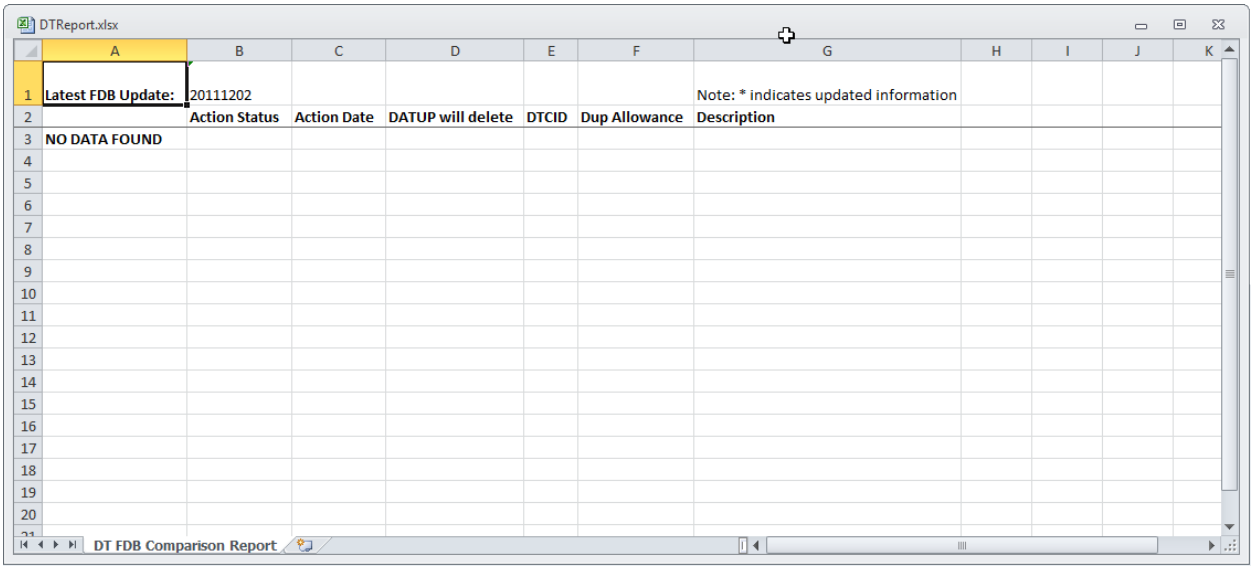
To run an FDB Comparison report, click the appropriate FDB Incremental Update date under the appropriate Report Heading.

Figure 114: FDB Incremental Updates



If there are no differences between the FDB After Update and FDB Before Update data of the same type in any of the records, a "No Data Found" message is printed on the FDB Comparison Report.

Figure 115: Report with No Differences



14.2.2 FDB Comparison Drug-Drug Interaction/Drug Pair Report

The FDB Comparison Drug-Drug Interaction/Drug Pairs Report displays the changes to existing Drug-Drug Interactions included in the Incremental FDB updates. All Action Statuses are compared and are included in the report. The following data points are compared between the FDB update and the VA Drug-Drug Interaction records:

- Corresponding FDB Interaction ID
- Interaction Description
- Monograph ID
- Severity Level Code
- Clinical Effect 1
- Clinical Effect 2
- Deleted Drug Pairs
- Added Drug Pairs

The DDI-DP FDB Comparison Report contains two types of spreadsheets:

- The DDI-DP FDB Comparison Report – gives information about the FDB comparisons and the associated VA custom records.
- FDB Interaction ID-DP – gives information about the added or deleted drug pairs for a specific FDB record. Each FDB update record that has added or deleted drug pairs has its own FDB Interaction ID-DP spreadsheet.

The following DDI-specific fields are included in the DDI-FDB Comparison Report spreadsheet:

Table 21: FDB Comparison Drug-Drug Interaction/Drug Pair Report Fields

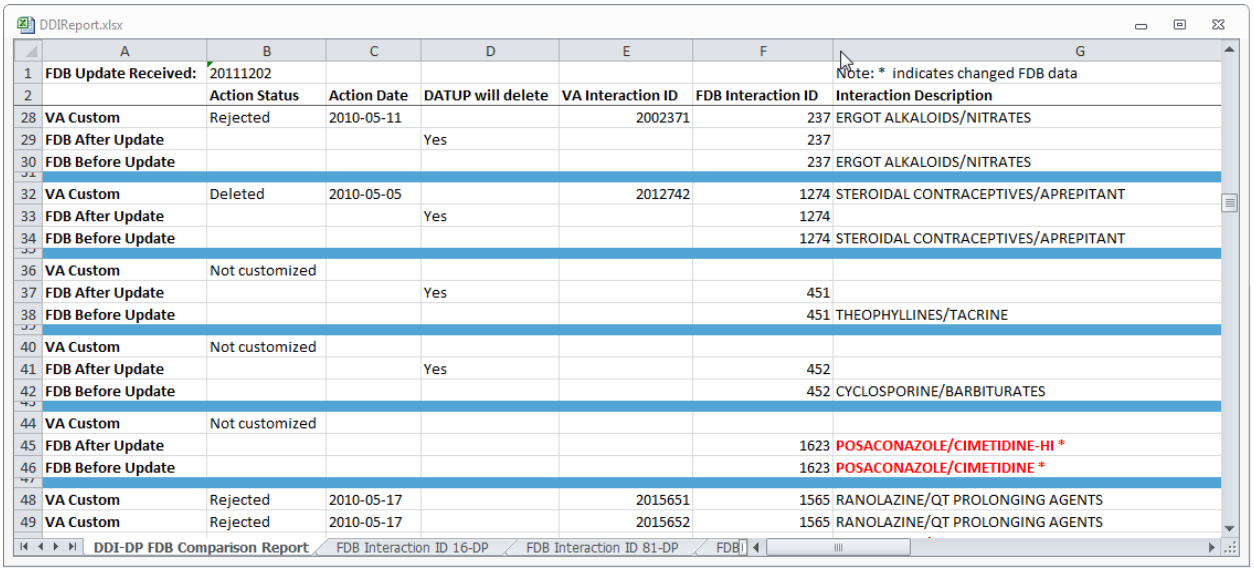
Field	Description
VA Interaction ID	A VA-assigned numerical identifier for the interaction.

Field	Description
FDB Interaction ID	An FDB-assigned numerical identifier for the interaction.
Interaction Description	A text description of the interaction.
Monograph ID	A numerical identifier for the Professional Monograph associated with the interaction.
Severity Level	A coded severity indicator.
Clinical Effect 1	A three letter code describing the clinical effect.
Clinical Effect 2	A three letter code describing the clinical effect.
Drug Pairs	If a DDI has drug pairs scheduled to be added or deleted by DATUP, there will be a message, "See FDB Interaction ID <FDB Interaction ID number>-DP." If a DDI record in the incremental FDB update file does not have added or drug pairs, this column will remain blank.

If the latest FDB update contains added or deleted drug pairs, these will be displayed on separate tabs titled "FDB Interaction ID <FDB Interaction ID number>-DP".

Each record consists of at least three lines and individual records are by a blank row (blue). There will be more than three lines if there is more than one VA Customization for the described interaction.

Figure 116: DDI-DP FDB Comparison Report



DDIReport.xlsx

	A	B	C	D	E	F	G
1	FDB Update Received:	20111202					Note: * indicates changed FDB data
2		Action Status	Action Date	DATUP will delete	VA Interaction ID	FDB Interaction ID	Interaction Description
28	VA Custom	Rejected	2010-05-11		2002371	237	ERGOT ALKALOIDS/NITRATES
29	FDB After Update			Yes		237	
30	FDB Before Update					237	ERGOT ALKALOIDS/NITRATES
32	VA Custom	Deleted	2010-05-05		2012742	1274	STEROIDAL CONTRACEPTIVES/APREPITANT
33	FDB After Update			Yes		1274	
34	FDB Before Update					1274	STEROIDAL CONTRACEPTIVES/APREPITANT
36	VA Custom	Not customized					
37	FDB After Update			Yes		451	
38	FDB Before Update					451	THEOPHYLLINES/TACRINE
40	VA Custom	Not customized					
41	FDB After Update			Yes		452	
42	FDB Before Update					452	CYCLOSPORINE/BARBITURATES
44	VA Custom	Not customized					
45	FDB After Update					1623	POSACONAZOLE/CIMETIDINE-HI *
46	FDB Before Update					1623	POSACONAZOLE/CIMETIDINE *
48	VA Custom	Rejected	2010-05-17		2015651	1565	RANOLAZINE/QT PROLONGING AGENTS
49	VA Custom	Rejected	2010-05-17		2015652	1565	RANOLAZINE/QT PROLONGING AGENTS

DDI-DP FDB Comparison Report | FDB Interaction ID 16-DP | FDB Interaction ID 81-DP | FDB

- VA Custom - Custom VA information about the Drug-Drug Interaction record(s). If the DDI has not been customized, the record will state "Not customized".
- Latest FDB - Indicates changes to the Drug-Drug Interaction record that appeared on the incremental FDB update you selected.
- Previous FDB - Displays the value for the Drug-Drug Interaction record in the incremental FDB update immediately prior to the incremental FDB update you selected.

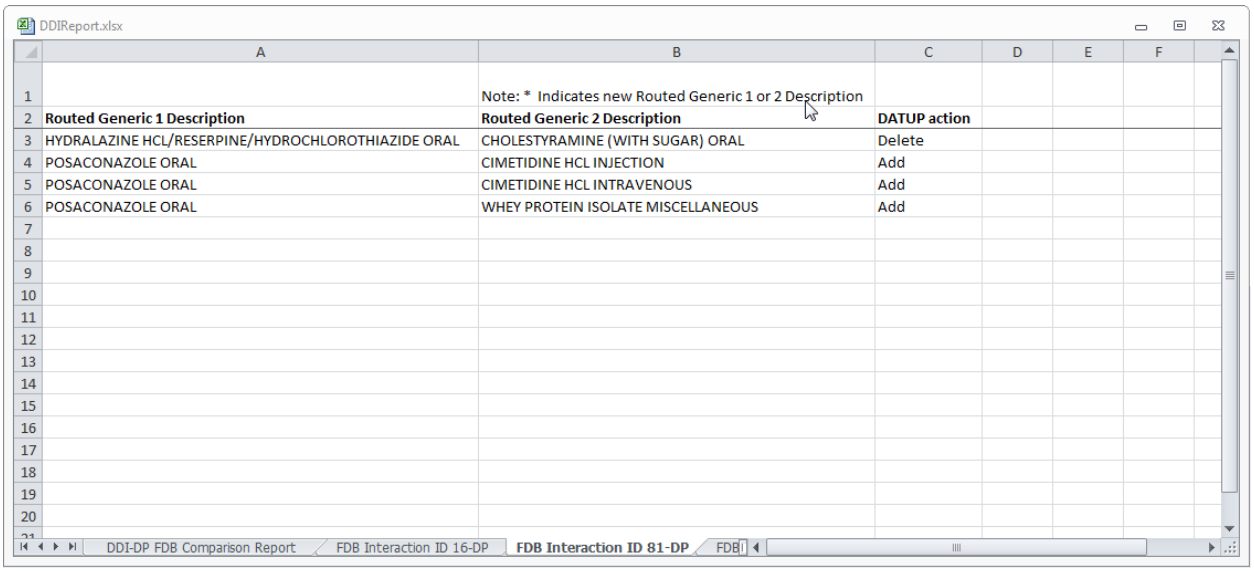
The following fields are included in the report:

Table 22: FDB Comparison Drug-Drug Interaction/Drug Pair Report Fields

Field	Description
Action Status	The current state of the record based on the most recent action performed on the associated record.
Action Date	The date the current action (Action Status) was performed.
DATUP will delete	YES in this column Indicates the associated record will be deleted by DATUP.
VA Interaction ID	A VA-assigned numerical identifier for the interaction.
FDB Interaction ID	An FDB-assigned numerical identifier for the interaction.
Interaction Description	A text description of the interaction.
Monograph ID	A numerical identifier for the Professional Monograph associated with the interaction.
Severity Level	A coded severity indicator.
Clinical Effect 1	A three letter code describing the clinical effect.
Clinical Effect 2	A three letter code describing the clinical effect.

If the latest FDB update contains added or deleted drug pairs, these will be displayed on separate tabs titled "FDB Interaction ID <FDB Interaction ID number>-DP".

Figure 117: FDB Interaction ID-Drug Pairs Tab



The following fields are included in the report:

Table 23: FDB Interaction ID-Drug Pairs Fields

Field	Description
Routed Generic 1 Description	The Routed Generic Description of Drug 1 in the Drug Pair.
Routed Generic 2 Description	The Routed Generic Description of Drug 2 in the Drug Pair.

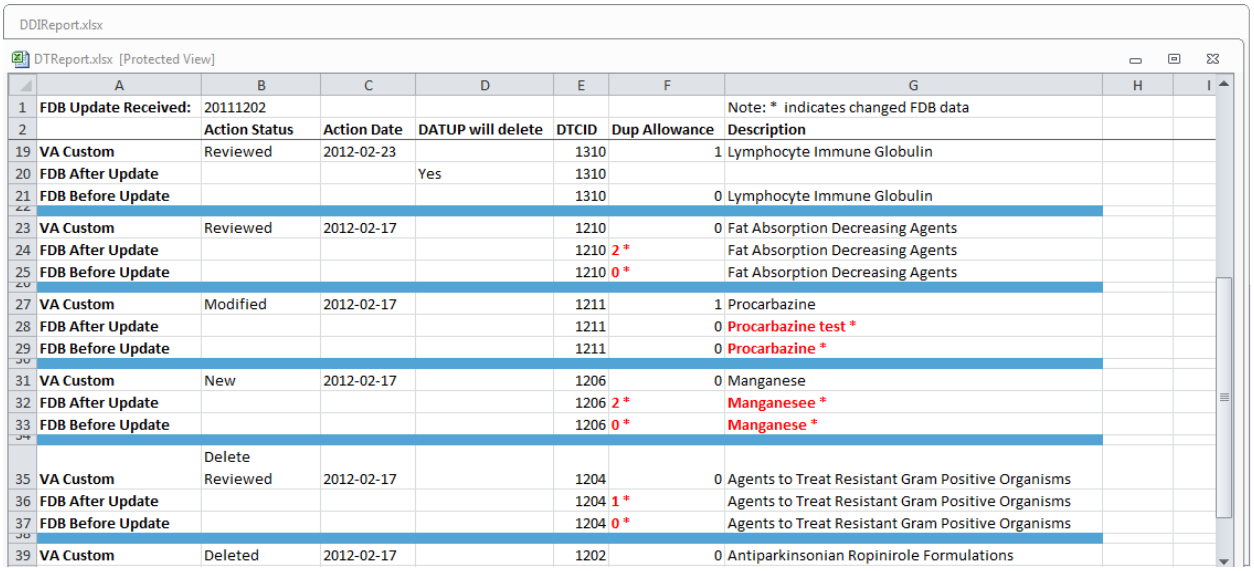
Field	Description
DATUP Action	The action that DATUP will perform. Either DATUP will add the drug pair to the PECS database or delete it from PECS.

Note: A DDI record that is not listed on the DDI-DT FDB Comparison Report spreadsheet can still have added or deleted drug pairs listed in the latest incremental FDB update file. In that case, the drug pair information is just listed on an FDB Interaction ID-DP spreadsheet.

14.2.3 FDB Comparison Duplicate Therapy Report

The Duplicate Therapy FDB Comparison Report displays the differences between the PECS FDB data and the data in the Incremental FDB Update file for the Duplicate Therapy (DT) concept. This report displays the following DT-specific data:

Figure 118: FDB Comparison Duplicate Therapy Report



DDIReport.xlsx

DTReport.xlsx [Protected View]

	A	B	C	D	E	F	G	H	I
1	**FDB Update Received:**	20111202					Note: * indicates changed FDB data		
2		**Action Status**	**Action Date**	**DATUP will delete**	**DTCID**	**Dup Allowance**	**Description**		
19	**VA Custom**	Reviewed	2012-02-23		1310	1	Lymphocyte Immune Globulin		
20	**FDB After Update**			Yes	1310				
21	**FDB Before Update**				1310	0	Lymphocyte Immune Globulin		
23	**VA Custom**	Reviewed	2012-02-17		1210	0	Fat Absorption Decreasing Agents		
24	**FDB After Update**				1210	2 *	Fat Absorption Decreasing Agents		
25	**FDB Before Update**				1210	0 *	Fat Absorption Decreasing Agents		
27	**VA Custom**	Modified	2012-02-17		1211	1	Procarbazine		
28	**FDB After Update**				1211	0	**Procarbazine test ***		
29	**FDB Before Update**				1211	0	**Procarbazine ***		
31	**VA Custom**	New	2012-02-17		1206	0	Manganese		
32	**FDB After Update**				1206	2 *	**Manganesee ***		
33	**FDB Before Update**				1206	0 *	**Manganese ***		
35	**VA Custom**	Delete Reviewed	2012-02-17		1204	0	Agents to Treat Resistant Gram Positive Organisms		
36	**FDB After Update**				1204	1 *	Agents to Treat Resistant Gram Positive Organisms		
37	**FDB Before Update**				1204	0 *	Agents to Treat Resistant Gram Positive Organisms		
39	**VA Custom**	Deleted	2012-02-17		1202	0	Antiparkinsonian Ropinirole Formulations		

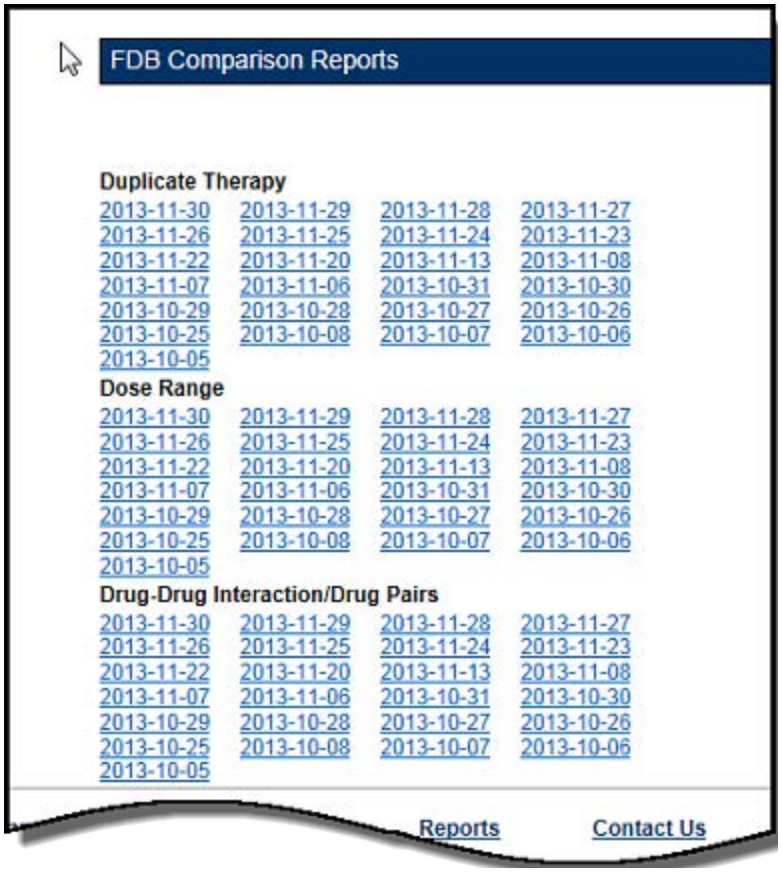
The three lines display the following fields:

Table 24: FDB Comparison Duplicate Therapy Report Fields

Field Name	Field Description
DTCID	Duplicate Therapy Control ID. A numerical identifier for the DT FDB and VA records.
Dup Allowance	Duplicate Allowance. The number of drugs performing the same function before a warning is issued.
Description	A description (name) of the drug that is the basis of the DT record.

To run the Duplicate Therapy FDB Comparison report, click the desired date of an FDB Incremental Update under the appropriate Duplicate Therapy heading.

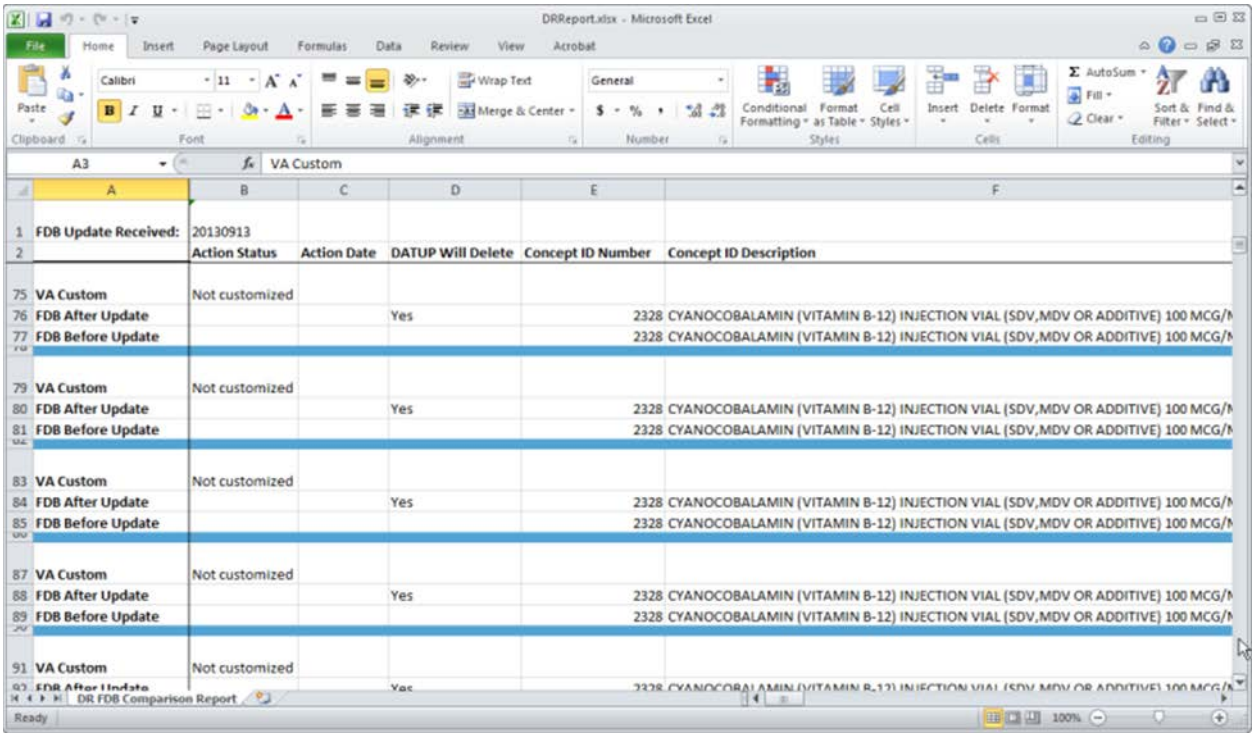
Figure 119: FDB Incremental Update Dates



14.2.4 FDB Comparison Dose Range Report

The Dose Range FDB Comparison Report displays the differences between the PECS FDB data and the data in the Incremental FDB Update file for the Dose Range (DR) concept.

Figure 120: FDB Comparison Dose Range Report



Only records where the Concept Type = 6 will display on the report. If the DR FDB record has not been customized, it will display on the report if the following conditions were met:

- Data in all of the first seven fields (Concept ID Number, Age Low in Days, Age High in Days, Dose Route ID, Dose Type ID, FDBDX, HITTYPE) is identical in the PECS FDB record and the latest incremental FDB update
- Data in at least one other field is different in the PECS FDB record and the latest incremental FDB update

If a DR FDB record has been customized, it will display on the report if all the conditions mentioned above have been met and the active VA custom record and the PECS FDB record are cross-referenced, thus indicating that the active VA custom record was created from the FDB record.

Fields

Table 25: FDB Comparison Dose Range Report

Field Name	Field Description
Concept ID Number	Number identifying the drug. Identifies a specific drug within a given concept type.
Age Low in Days	Lowest patient age in days to which dosing information applies
Age High in Days	Highest patient age in days to which dosing information applies
Dose Route ID	Dose Route Identifier. Refers to the route of administration, which is the site or method by which a drug is administered

Field Name	Field Description
Dose Type ID	Dose type identifier
FDBDX	FDBDX type code to identify a Medical Condition
HITTYPE	Signifies whether the dose record came from the Dosage Range Check module or the Minimum/Maximum dosing module. There are 3 possible values: 1 – Dose Range Check; 2 – Dosing Not Established For This Age Range; 3 – Minimum/maximum dosing. HITTYPE is used to determine how to structure the dose alerts.
Concept ID Description	Text description of the Concept ID. Also defined as the drug name. For example, the Concept ID Description is GUAIFENESIN/PHENYLPROPANOLAMINE HCL/ACETAMINOPHEN/CAFFEINE ORAL TABLET and the Concept ID is 713.
DXID	First Databank Medical Lexicon (FML) Disease Identifier
Dose Low	Minimum amount to be administered per day
Dose Low Units	Unit of measure for low dose per day
Dose High	Highest amount to be administered per day
Dose High Units	Unit of measure for high dose per day
Dose Form Low	Low dose for a given dose form
Dose Form Low Units	Unit of measure for the dose form (EA/KG/DAY)
Dose Form High	High dose for a given dose form
Dose Form High Units	Unit of measure for the dose form (EA/KG/DAY)
Frequency Low	Low end of a drug's frequency of administration per day
Frequency High	High end of a drug's frequency of administration per day
Duration Low	Lowest recommended duration of therapy (in days)
Duration High	Highest recommended duration of therapy (in days)
Maximum Duration	Maximum recommended duration of therapy (in days)
Maximum Single Dose	Maximum amount to be administered in a single dose
Maximum Single Dose Units	Unit of measure for the maximum single dose
Maximum Single Dose Form	Maximum single dose for a given form
Maximum Single Dose Form Units	Unit of measure for the dose form (EA/KG/DAY)
Maximum Daily Dose	Maximum amount to be administered per day
Maximum Daily Dose Units	Unit of measure for the maximum daily dose
Maximum Daily Dose Form	Maximum daily dose for a dose form
Maximum Daily Dose Form Units	Unit of measure for the dose form (EA/KG/DAY)
Maximum Lifetime Dose	Maximum amount to be administered over a patient's lifetime, if available

Field Name	Field Description
Maximum Lifetime Dose Units	Unit of measure for maximum lifetime dose
Maximum Lifetime Dose Form	Maximum lifetime dose for a given dose form
Maximum Lifetime Dose Form Units	Unit of measure for the dose form (EA/KG/DAY)
Dose Rate Low	Minimum amount to be administered per dose rate (hours or minutes)
Dose Rate Low Units	Unit of measure for low dose rate (hours or minutes)
Dose Rate High	Highest amount to be administered per dose rate (hours or minutes)
Dose Rate High Units	Unit of measure for high dose rate (hours or minutes)
Dose Form Rate Low	Low dose for a given dose form rate (hours or minutes)
Dose Form Rate Low Units	Unit of measure for the dose form rate (hours or minutes)
Dose Form Rate High	High dose for a given dose form rate (hours or minutes)
Dose Form Rate High Units	Unit of measure for the dose form rate (hours or minutes)
Maximum Single Dose Rate	Maximum amount to be administered in a single dose rate (hours or minutes)
Maximum Single Dose Rate Units	Unit of measure for the maximum single dose rate (hours or minutes)
Maximum Single Dose Form Rate	Maximum single dose for a given dose form rate (hours or minutes)
Maximum Single Dose Form Rate Units	Unit of measure for the dose form rate (hours or minutes)
Maximum Daily Dose Form Rate	Maximum daily dose for a dose form rate (hours or minutes)
Maximum Daily Dose Rate	Maximum amount to be administered per dose rate (hours or minutes)
Maximum Daily Dose Form Rate Units	Unit of measure for the dose form rate (hours or minutes)
Maximum Daily Dose Rate Units	Unit of measure for the maximum daily dose rate (hours or minutes)
Max Single NTE Dose	Maximum Not-to-Exceed (NTE) amount to be administered in a single dose
Max Single NTE Dose Unit	Unit of measure for the maximum single NTE dose
Max Single NTE Dose Form	Maximum Unit of measure for the NTE dose form (EA/KG/DAY)
Max Single NTE Dose Form Unit	Maximum Not-to-Exceed amount to be administered in a single dose for a given dose form
Hepatic Impairment Indicator	Indicates that the drug's dosing information needs to be adjusted for a patient with hepatic impairment. This flag does not differentiate between mild, moderate, and severe hepatic failure.
Renal Impairment Indicator	Indicates whether the dosing information needs to be modified for any degree of renal impairment in the patient.

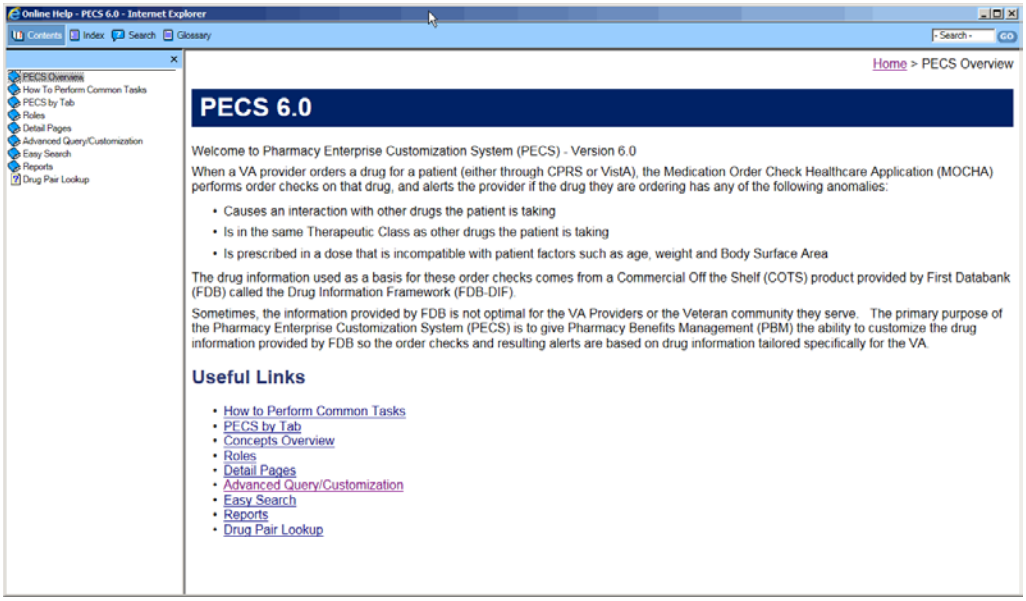
Field Name	Field Description
CRCL Threshold	Lowest Creatinine Clearance (CRCL) to which dosing applies.
CRCL Threshold Units	Unit of measure for the Creatinine Clearance (CRCL) threshold.
Low Elimination Half Life	Low end of the drug's half-life range
High Elimination Half Life	High end of the drug's half-life range.
Half Life Units	Unit of time for the half-life range of a drug.
Weight Required Indicator	Indicates whether weight is required for dosing.
BSA	Required Indicator Indicates whether Body Surface Area (BSA) is required for dosing

(This page included for two-sided copying.)

15 Online Help

PECS provides an online help system that provides information on using the application.

Figure 121: PECS Online Help Window



15.1 Accessing Online Help

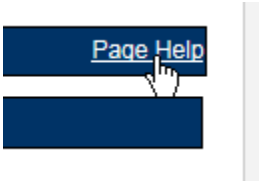
There are two ways to access online help: the Help tab and Page Help link.

1. Click the Help tab to open the main Online Help page

Figure 122: The Help Tab

2. Click the Page Help link to access help specific to the page you are on.

Figure 123: The Page Help Link



Using the Page Help link will display help page relevant to the current page. Click the Show link to display the Table of Contents.

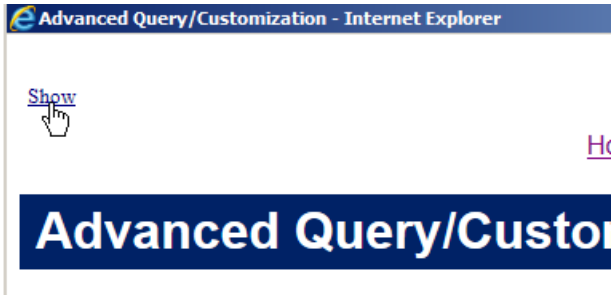



Figure 124: The Show Link