

Pharmacy Enterprise Customization System (PECS) Requirements Specification Document



Department of Veterans Affairs

December 2014

Version 6.0

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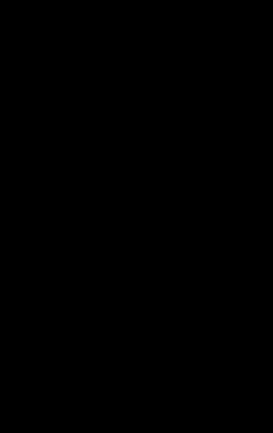
Revision History

Note: The revision history cycle begins once changes or enhancements are requested after the Requirements Specification Document has been baselined.

Date	Version	Description	Author
12/30/2014	7.6	Some content removed	
12/22/2014	7.5	Minor formatting updates	
12/09/2014	7.4	Updates for PECS 6.0; transfer to ProPath Template 1.3	
06/24/2014	7.3	Removed the note about the Function Point Analysis team in section 8.1	
05/29/2014	7.2	Small grammatical changes, updated graphics for 508 compliance	
05/07/2014	7.1	Updated SPEC1082.1. Moved SPECS 1211 and 1211.1 to the Easy Search section.	
04/22/2014	7.0	Made more updates to SPEC843	
04/17/2014	6.9	Updated SPEC843 and SPEC1107	
01/10/2014	6.8	Added the function point counts and graphs.	
01/03/2014	6.7	In SPEC839, changed the value assigned to the Requestor role from 284 to 384.	
12/03/2013	6.6	Signed	
12/02/2013	6.5	Ready for Signature w/out FPC	
11/29/2013	6.4	Added RRC 50911.	
11/18/2013	6.3	Updated SPEC 905, added RRCs 41180, 41430	
11/6/2013	6.2	Signed and ready for TIA submission	
10/31/2013	6.1	Added RRC 41123. Fixed some typos.	
10/22/2013	6.0	Added RRCs 41073, 41076, 41078, 41102, 41104, 41110, 41111, 41114, 41118, 41119	
09/16/2013	5.9	Added SPECS 1238 and 1238.1	
06/21/2013	5.8	Filled in the function point counts	
06/11/2013	5.7	Edits per Deb Coulter	
06/10/2013	5.6	Edited & readied for signature	
06/06/2013	5.5	Beginning skeleton for PECS v5.0; added SPECS 1234, 1234.1, 1235, 1235.1, 1236, 1236.1 and 1237, 1237.1	
06/05/2013	5.4	Readied for signature	
5/30/2013	5.3	Updated Function Point Count table and added charts.	
5/13/13	5.2	Added SPECS 1222, 1222.1, 1223, 1223.1, 1224, 1224.1, 1225, 1225.1, 1226, 1226.1	
3/26/13	5.1	Updated SPEC 1221.1 to conform to the description in the PECS v4.0 Sprint 1 backlog.	

Date	Version	Description	Author
3/19/13	5.0	Added SPECS 1220, 1220.1, 1221, 1221.1. Deleted SPEC 922.	
1/30/13	4.9.	Signed and Published	
1/23/13	4.8	Readied for signature	
1/22/13	4.7	Added tags to the new requirements: SPECS 1208, 1208.1, 1209, 1209.1, 1210, 1210.1, 1211, 1211.1, 1212, 1212.1, 1213, 1213.1, 1214, 1214.1, 1215, 1215.1, 1216, 1216.1, 1217, 1217.1, 1218, 1218.1, 1219, 1219.1. Deleted SPEC 1185.	
1/22/13	4.6	Basic edits	
1/18/13	4.5	Added the function point counts and graphs.	
1/17/13	4.4	Added more CCR numbers to all the History of Changes requirements.	
1/9/13	4.3	In the Scope section, updated the descriptions for History of Changes, Batch State Changes, and Display FDB PM/DT Record when FDB Record Selected.	
1/8/13	4.2	Added untagged specs for these user stories: Looking Up an FDB Drug Pair, Batch State Changes to Drug Pairs, DDI Submit as Reviewed, Missing Dose Range Not to Exceed (NTE) Values, Report of the Drug Pairs (DP) and Associated Interactions for a Dispensable Drug, Search Routed Generics in DP Customization, Automatically Add DP From Routed Generic Lists. Added descriptions of the PECS v3.0 user stories to the Scope section of this document.	
12/27/12	4.1	Removed blue notations, updated TOC	
12/26/12	4.0	Updated the user story descriptions for the History of Changes functionality to match the descriptions in the PECS v3.0 backlogs.	
12/14/12	3.9	Added SPECS 1184, 1184.1 and several untagged specs, which are listed as <tag pending>.	
11/15/2012	3.8	Beginning skeleton for PECS 3.0	
08/02/2012	3.7	Added [REDACTED] function point counts and graphs.	
06/15/2012	3.6	Per CR5380, updated SPEC 869 to say that the current check just uses the Corresponding FDB Id, Reverse Corresponding FDB Id, and Severity Level to see if the DDI is a duplicate of an existing DDI.	
06/04/2012	3.5	Modifications requested by [REDACTED] [REDACTED] r	
05/30/2012	3.4	Review, technical edit	

Date	Version	Description	Author
5/29/2012	3.3	Added SPECS 1152 and 1153. Renamed the Customization tab to the Advanced Query/Customization tab, and the Settings tab to the Administration tab. In the Function Point Analysis section, added a note about why it is not completed yet. Moved SPECS 1127 and 1127.1 to the Manage Custom Drug Pairs section.	
5/23/2012	3.2	Per the requirements in the Null Drug Pair Removal user story, updated SPECS 944, 970, 1012, 1088, and 1088.1 and added SPEC 1151. Updated Sections 2.14.1 and the TOC. Moved SPECS 1143 and 1143.1 to the Reports section.	
5/15/2012	3.1	Updated TOC and did 1 st level edit	
5/15/2012	3.0	Added SPECS 1133, 1133.1, 1143, 1143.1, 1145, 1145.1, 1147, 1147.1, and 1149, 1149.1. Deleted SPECS 1084 and 1084.1.	
5/4/2012	2.9	Added SPECS 1141 and 1141.1	
4/30/2012	2.8	Added SPECS 1131, 1131.1, 1135, 1135.1, 1137, 1137.1, 1139, 1139.1	
4/4/2012	2.7	Updated the document to PECS v2.2. Added SPECS 1127, 1127.1, 1129, and 1129.1.	
3/16/2012	2.6	Section 2.6.5 – updated the requirement to say that a requestor is not allowed to modify another user's request.	
1/30/2012	2.5	Updated the table of contents; added note about changes made by [REDACTED] to reflect performance specifications determined by Testing Services and PECS SQA; changed the date of the document back to November, 2011, to reflect the actual date of document release.	
1/23/2012	2.4	Updated the Customization/My Queries table in section 2.14.1; updated the Performance Specifications and added SPEC1125.	
12/8/2011	2.3	Updated the Disaster Recovery requirements per directive from Pharmacy Benefits Management (PBM).	
11/30/2011	2.2	Spec numbers verified and some changed	
11/29/2011	2.1	Changed to reflect the Spec numbers as required by ESE during their initial review	
11/15/2011	2.0	Signed and changes in email from W. Whitaker completed.	
11/14/2011	1.8	Added function point information	
11/10/2011	1.6	Formatted document	
11/10/2011	1.7	Readied for Signature	

Date	Version	Description	Author
11/4/2011	1.5	Made changes based on the SQA review of the RSD	
11/2/2011	1.4	Added the CR and CCR references to the requirements added in PECS v2.1	
11/1/2011	1.3	First release of the PECS v2.1 requirements	
06/03/2011	1.2	Changed format of electronic signatures per directive to Technical Writers	
05/04/2011	1.1	Adjusted Attachment A – Approval Signatures to match template 1.4	
04/20/2011	1.0	First document release	

Place latest revisions at top of table.

The Revision History pertains only to changes in the content of the document or any updates made after distribution. It does not apply to the formatting of the template.

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Artifact Rationale

The Requirements Specification Document (RSD) records the results of the specification gathering processes carried out during the Requirements phase. The RSD is generally written by the functional analyst(s) and should provide the bulk of the information used to create the test plan and test scripts. It should be updated for each increment.

The level of detail contained in this RSD should be consistent with the size and scope of the project. It is not necessary to fill out any sections of this document that do not apply to the project. The resources necessary to create and maintain this document during the life cycle of a large project should be acknowledged and clearly reflected in project schedules. Do not duplicate data that is already defined in another document or a section in this document; note in the section where the information can be found.

Instructions

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The following project types are required to complete this artifact. Exceptions are outlined where needed throughout the document.

Activity	New Capability (1)	Feature Enhancement (2)
Field Deployment (A)	Yes	Yes
Cloud/Web Deployment (B)	Yes	Yes
Mobile Application (C)	Yes	Yes

Table of Contents

1. Introduction	1
1.1. Purpose	1
1.2. Scope	1
1.3. References	1
2. Overall Description	2
2.1. Accessibility Specifications.....	2
2.2. Business Rules Specification.....	2
2.3. Design Constraints Specification.....	2
2.4. Disaster Recovery Specification	2
2.5. Documentation Specifications.....	2
2.6. Functional Specifications	2
2.7. Graphical User Interface (GUI) Specifications	4
2.8. Multi-divisional Specifications.....	28
2.9. Performance Specifications.....	28
2.10. Quality Attributes Specification	29
2.11. Reliability Specifications.....	29
2.12. Scope Integration.....	29
2.13. Security Specifications	29
2.14. System Features	32
2.15. Usability Specifications.....	32
3. Applicable Standards	32
4. Interfaces.....	32
4.1. Communications Interfaces.....	32
4.2. Hardware Interfaces.....	33
4.3. Software Interfaces.....	33
4.4. User Interfaces.....	33
5. Legal, Copyright, and Other Notices	33
6. Purchased Components.....	33
6.1. Defect Source (TOP 5).....	33
7. User Class Characteristics.....	33
8. Estimation	33
9. Approval Signatures	35
Appendix A Use Case Specification	Error! Bookmark not defined.
A.1. <Use Case Name>	Error! Bookmark not defined.
A.2. Brief Description	Error! Bookmark not defined.
A.3. Use Case Trigger	Error! Bookmark not defined.

A.4. Use Case Context Diagram	Error! Bookmark not defined.
A.5. Use Case Actors	Error! Bookmark not defined.
A.6. Preconditions	Error! Bookmark not defined.
A.6.1. Precondition 1	Error! Bookmark not defined.
A.7. Basic Flow of Events	Error! Bookmark not defined.
A.7.1. <First Step of Basic Flow>	Error! Bookmark not defined.
A.8. Alternative Flows	Error! Bookmark not defined.
A.8.1. < First Alternative Flow >	Error! Bookmark not defined.
A.8.2. < Second Alternative Flow >	Error! Bookmark not defined.
A.9. Sub Flows	Error! Bookmark not defined.
A.9.1. <First Subflow>	Error! Bookmark not defined.
A.9.2. < Second Subflow >	Error! Bookmark not defined.
A.10. Postconditions	Error! Bookmark not defined.
A.10.1. < Post Condition One >	Error! Bookmark not defined.
A.11. Special Specifications	Error! Bookmark not defined.
A.11.1. < First Special Specification>	Error! Bookmark not defined.
A.12. Extension Points	Error! Bookmark not defined.
A.12.1. <Name of Extension Point>	Error! Bookmark not defined.
B. Acronym List and Glossary	Error! Bookmark not defined.

1. Introduction

The following section outlines the purpose, scope, acronyms and definitions, and references.

1.1. Purpose

The purpose of this Requirements Specification Document (RSD) is to document the requirements for the Pharmacy Enterprise Customization System (PECS).

1.2. Scope

This document captures the functional and non-functional requirement specifications for PECS. This document will be considered the baseline for PECS requirements from v6.0 and beyond.

This RSD is based on the customization and workflow requirements submitted by Pharmacy Benefits Management (PBM). The requirements support the following five Business Concepts:

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

1.3. References

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

This manual contains references to several other documents. These documents can be found on following sites:

PECS IPT Review Portal:

[REDACTED]

PRE SharePoint Site:

[REDACTED]

PECS 6.0 SharePoint Site:

[REDACTED]

PRE Project Notebook (TSPR) Site:

[REDACTED]

The following documents are referenced within this document:

- PRE V0 5 OC SRS 091611_V8_1
- Austin Information Technology Center (AITC)'s Application Contingency Plan document
- PECS System Design Document

- PECS Product Architecture Document
- PECS Interface Control Document (ICD)

If you cannot find a specific document, please advise the Program Manager found on the TSPR site.

2. Overall Description

The functional and non-functional specifications for the PECS product are described in the sections which follow.

2.1. Accessibility Specifications

N/A

2.2. Business Rules Specification

N/A (Agile Development Process)

2.3. Design Constraints Specification

This section lists the design constraints specifications:

- SPEC844: The system shall follow the Section 508 compliance standards for the GUI. (3.6.1.5)
- SPEC845: The system shall support TRM-approved browsers that are part of the standard client system configuration and are supported through configuration and patching maintenance on an enterprise level. (CR 4573)
- SPEC846: The system shall follow VA's authentication/authorization standard. (3.6.3.9)
- SPEC847: The system shall display time in standard VA format (MMDDYYYY:HHMMSS) based on the time set on the server. (3.6.1.12)
- SPEC848: The system shall display entered text as English. (3.6.1.13)

2.4. Disaster Recovery Specification

SPEC1124 In the event of a disaster taking the data center hosting PECS off-line, the business customer expects PECS to be restored within three days.

2.5. Documentation Specifications

The project shall follow all VA-required ProPath and PMAS documentation standards for VA projects.

2.6. Functional Specifications

The functional specifications of the PECS product are described in the sections which follow.

2.6.1. Proposed PECS 6.0 Additions and Enhancements

In line with the PRE Approach to Adopting Agile, the scope of the increment will be defined in a Sprint Planning Session as the increment progresses through the sprints. With support from the Scrum Team and the PECS Workgroup, the Lead Clinical Analyst has reviewed the outstanding PECS User Stories, and based on business value, prioritized them in the Product Backlog. From this prioritized list, the Lead Clinical Analyst defines the Increment Backlog, a subset of the

Product Backlog, by identifying the User Stories PBM would like to include in the increment. Prior to the beginning of Sprint 1, the Lead Clinical Analyst will define acceptance criteria for the top priority User Stories in the Increment Backlog.

The Lead Clinical Analyst can add, change, or reprioritize User Stories in the Increment Backlog at any time prior to their inclusion in a sprint. This allows PBM the flexibility to change or reprioritize the work to be done during the course of the increment.

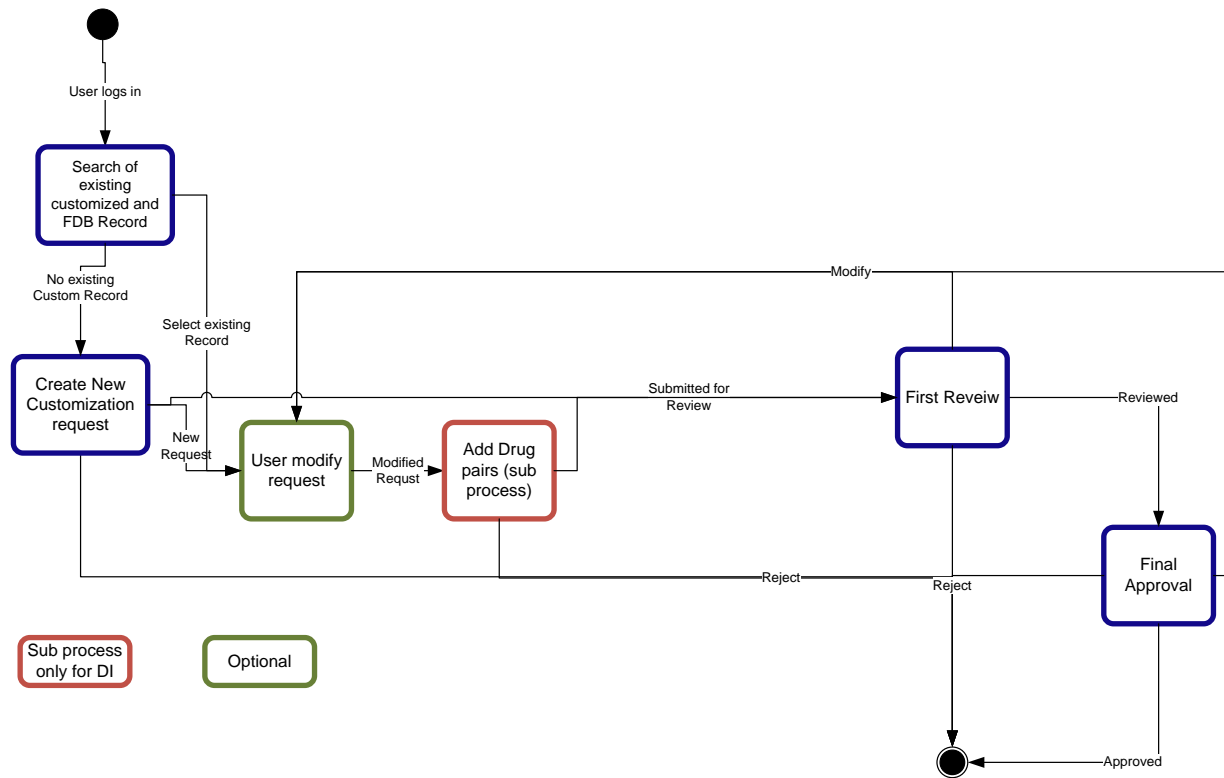
Sprint Planning Sessions attended by the Lead Clinical Analyst and the Scrum Team will be held immediately prior to the beginning of each Sprint. During these planning sessions, the User Stories in the Increment Backlog will be discussed, estimated, and broken down into smaller tasks. Based on factors such as business value and what will fit into the three week timeframe, the Lead Clinical Analyst and Scrum Team will agree on and the Scrum Team will commit to the User Stories that will be completed in the upcoming sprint.

- PECS upgrade from FDB Medknowledge v3.3 to v4.x
- PECS Easy Search Dose Range: Add links to PECS records from search results
- Redesign of Drug Pair Customization page to address performance issues
- Analysis and resolution of export query results limitations in Excel format
- Develop process to receive additional data via FDB Medknowledge weekly FTP transfer
- PECS architectural changes needed when MOCHA Server is transitioned from Cache to Oracle database (Depends on MOCHA's direction)
- Automate the lookup table synchronization process so that PECS lookup and terminology tables will stay in sync with the First Data Bank (FDB) tables
- Analysis of solutions for archiving data
- Merge functionality between PECS and Pharmacy Product System-National (PPS-N)
- Inclusion of additional FDB order checks
- Analysis of use of Public Key Infrastructure (PKI)-based Personal Identity Verification (PIV) cards to access PECS
- Implementing Secure File Transfer Protocol (sFtp) for PECS/DATUP
- Setting up Virtual DEV/SQA environment for PECS/DATUP
- WebLogic version Upgrade for PECS per TRM recommendation
- Mitigate Security Vulnerability(s) reported in AITC Security Scan for PECS
- Implement design solution Comparison Report- redesigns PECS.
- Implementing PIV/IAM.
- Implementing Enterprise Service Bus (ESB) for PECS/DATUP (as required by VA).

2.6.2. Customization Workflow

The following workflow diagrams depict the life cycle of a customization change from the Requester entry to the point the record is ready to be sent to the production FDB DIF custom table. The updates and changes are made and maintained in a Staging table. Approved records are extracted only when the Release Manager submits a request. Records are then formatted and placed in a directory to be applied to the local sites expecting the data. The steps of first review and final approval together are considered Approval Process.

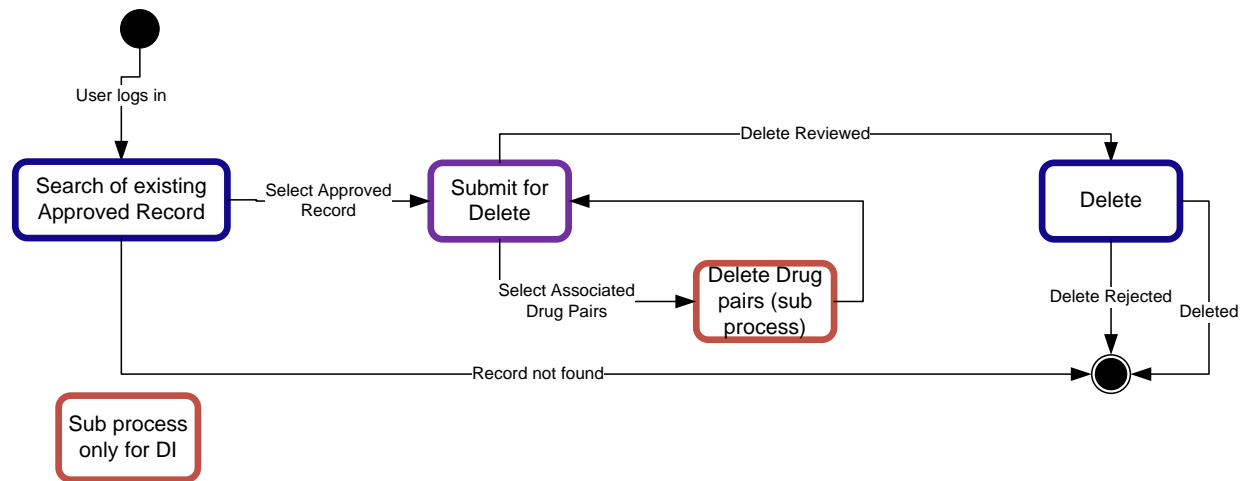
Create New or Modify Existing Customized Record



Action	Requester	Approver	Current "Action Status"	New "Action Status"	Current Action Reason
Create New customization	Y	Y		New	Y
Modify (own request)	Y	Y	New	Modify	N
Modify (own request)	Y	Y	Modify	Modify	N
Modify (other's request)	N	Y	New	Modify	N
Modify (other's request)	N	Y	Modify	Modify	N
Modify (Non FDB fields)	N	Y	Reviewed	Reviewed	Y
Modify (Non FDB	Y	Y	Approved	Approved	Y

Action	Requester	Approver	Current "Action Status"	New "Action Status"	Current Action Reason
fields)					
Modify (Non FDB fields)	Y	Y	Deleted	Deleted	Y
Modify (Non FDB fields)	Y	Y	Rejected	Rejected	Y
Modify (FDB fields)	N	Y	Reviewed	Modify	N
Modify (FDB fields)	Y	Y	Approved	Modify	Y
Modify (FDB fields)	Y	Y	Deleted	Modify	Y
Modify (FDB fields)	Y	Y	Rejected	Modify	Y
Reject	Y (own request)	Y	New	Rejected	Y
Reject	Y (own request)	Y	Modify	Rejected	Y
Reject	N	Y	Reviewed	Rejected	Y
Reject	N	Y	Modify after delete	Deleted	Y
Reject	N	Y	Modify after Approved	Approved	Y
Reject	N	Y	Reviewed after delete	Deleted	Y
Reject	N	Y	Reviewed after Approved	Approved	Y
Review	N	Y	New	Reviewed	N
Review	N	Y	Modify	Reviewed	N
Approve	N	Y (not if also reviewed the customization)	Reviewed After Delete	Approved	N

Delete Customized Record



Action	Requester	Approver	Current "Action Status"	New "Action Status"	Current Action Reason
Submit for delete	N	Y	Approved	Submit for Delete	Y
Delete	N	Y (not if submitted for delete)	Submit for Delete	Deleted	N
Reject	N	Y	Submit for Delete	Approved	Y
Delete	N	Y	Delete Reviewed	Deleted	Y
Review	N	Y	Modified After Delete	Reviewed After Delete	N
Review	N	Y	Deleted	Review After Delete	N

Common Customization Requirements

This section lists the common customization requirements:

- SPEC867 The system shall allow site personnel (Requester and Approver Roles) to enter and submit customization requests based on an existing FDB record, VA customized record, or using blank form where permitted. (3.6.4.1)
- SPEC868: The system shall provide navigation from the query page to a data entry page. (3.6.1.8)
- SPEC869: The system shall check that a new VA Customization request is not a duplicate entry. A VA customization request will be considered duplicate if the following fields are the same within each business concept. If a duplicate is encountered, a warning message is displayed that a duplicate record exists and user will not be allowed to create a duplicate request. (3.6.4.6) (CR 5380, CCR 5339)

DDI:

- FDB Interaction ID
- Reverse FDB Interaction ID
- Severity Level

DP:

- VA Interaction ID
- Routed Generic ID 1
- Routed Generic ID 2

PM:

- Monograph Title (required)
- Severity Level (required)

DT:

- Dtcid

DR:

- Concept ID
- Dose route
- Dose type
- Age low
- Age high
- SPEC870 The system shall support following Action Statuses: (3.6.7.7)
 - Modified
 - New
 - Approved
 - Reviewed
 - Rejected
 - Delete Reviewed
 - Deleted

- SPEC871: The system shall store Requester name information. (3.6.4.2)
- SPEC872 The system shall use the application server date, and time as the date/time stamp of request states changes. (3.6.4.3)
- SPEC873: The system shall provide capability to cancel out of a transaction without saving the changes. (3.6.1.9)
- SPEC874: The system shall provide capability to update customized records. (3.6.7.4)
- SPEC875: The system shall provide capability for the user to modify the request before assigning the request for review by an approver. (3.6.7.6)
- SPEC876: The system shall keep a customization request in the Delete Action Status active. (3.6.1.10)
- SPEC877: The system shall provide the capability for a user to view the FDB record that is being overridden by a customization. The user can view the data that resides in FDB tables or staging tables to make changes if necessary as a new customization change. (3.6.4.4)
- SPEC878: The system shall provide a means to apply updates to non FDB-DIF fields regardless of Action Status. The action status will remain the same and not change. The “action performed by” field will remain the same. The change will not require the Approval Process. (3.6.16.1)
- SPEC879: The system shall provide an optional field of ‘Assign_to’ for VA customization request to be available on data entry page where the user may assign request to an available approver. (3.6.1.18)
- SPEC880: The system shall precede the comment with the Date, Time and the SignOn ID of who made the entry, when it is displayed in the Action Reason History field. (3.6.7.9)
- SPEC881: The system shall require a record to be reviewed by an approver before being approved. The user who reviewed the record cannot approve the same record. (3.6.3.4)
- SPEC882: The system shall allow the user to update a record with Action Status of Deleted. Once modified, the record will go thru the Approval Process.
- SPEC883: The system shall allow the user to update a record with Action Status of Approved. Once modified, the record will go thru the approval process.
- SPEC884: The system shall transition a record back to an Action Status value of Approved, if, after Approval, a record is Modified or Reviewed and then Rejected. Except for Action Reason History, all the fields will be rolled back.
- SPEC885: The system shall provide capability to delete (inactivate) Approved VA Customized request. (3.6.7.5)
- SPEC886 The system shall transition a record back to an Action Status value of Deleted, if the record once Deleted was then Modified or Reviewed and then Rejected. Except for Action Reason History, all the fields will be rolled back.

- SPEC1115: The system shall carry forward all existing content from Action Reason History fields on individual records when being upgraded to a new release of the software. (CCR 3909)
- SPEC1116: The system shall provide navigational links at the bottom of each PECS page to all PECS tabs. (CCR 4785)
- SPEC1131 Record Locking: (CR 2464, CCR 5167)
 - SPEC1131.1 As a PECS user, I would like the ability for only a single user to edit a PECS record so that multiple users can no longer simultaneously edit a record and overwrite each other's changes and/or omit changes made by another user. (CR 2464, CCR 5167)
- SPEC1221 Remove the Action Effective Date field: (CR 6395, RTC ID 11295)
 - SPEC1121.1 As a PECS User, I would like the Action Effective date field removed from PECS so that users are not confused with the irrelevant data in that field. (CR 6395, RTC ID 11295)

Manage Custom Drug-Drug Interaction

This section details the functionality to capture drug-drug interaction requests, such as a new drug-drug interaction, severity level change, or changes to one of the FDB fields. A request can be entered at a site by a person with a Requester or Approver role to access the application. Requests will be reviewed by the PBM committee following the prescribed workflow.

- SPEC887: The system shall display the interaction ID. (3.6.7.11)
- SPEC888: The system shall display a warning message when the custom drug interaction severity code entered is of less severity than that of original FDB drug interaction severity code. (3.6.7.16)
- SPEC889: The system shall provide capability for the user to select the monograph ID and title field. (3.6.7.17)
- SPEC890: The system shall store the monograph ID number. (3.6.7.18)
- SPEC891: The system shall provide an update field for description 1. (3.6.7.19)
- SPEC892: The system shall provide capability for user to select clinical effect code 1 from a dropdown list. (3.6.7.20)
- SPEC893: The system shall provide capability for user to select clinical effect code 2 from a dropdown list. (3.6.7.21)
- SPEC894: The system shall auto fill UICATEGORY1 field with a display default of "VA" for the Drug-Drug Interaction records. (3.6.7.8)
- SPEC895: The system shall provide a means to modify an existing deleted Interaction that has once been exported. (3.6.16.4)
 - The user will be allowed to proceed with the ability to add drug pair.
 - The user will have the ability to maintain or modify information in the interaction record. The record approval process will be required.

- SPEC896: The system shall provide the Drug Pairs button at the top and bottom of the Drug-Drug Interaction screen. (3.6.7.28)
- SPEC897 Once the approved Interaction record is released it will replace the existing Interaction record in DIF while maintaining the existing value in the Interaction ID key field (3.6.16.3)
- SPEC898: The system shall provide a means to modify the 'Severity Level', 'Interaction Description', and/or 'Monograph ID' of an Approved VA Customization Interaction record (while maintaining the Approved record at the local sites until the modified record has been through the approval process and released).
- SPEC899 Interaction Description: The system shall display an error message if the user tries to add a second slash ("/") as part of the Interaction Description.
- SPEC1064 Navigate from DDI page to associated PM detail page and original FDB record: (CR 2489, CR 4304)
 - SPEC1064.1 As a User, I would like the ability to navigate from DDI detail page to the associated PM detail page and the ability to view original FDB record.
- SPEC1122 DDI Detail Pages - Information and Error Messages: (CR 4301, CCR 4603)
 - SPEC 1122.1 As a PECS user, I want the informational and error messages on the DDI Detail Pages to be clear and precise so that I understand the input PECS expects and the processes that PECS executes.
- SPEC1133 Create Multiple VA Custom DDI Records with Unique Set of Drug Pairs: (CR 4110, CCR 5181)
 - SPEC1133.1 As a PECS user, I want to create more than one VA custom Drug-Drug Interaction (DDI) record with unique set of Drug Pairs (DP) from a single FDB Drug-Drug Interaction record, so I can create more accurate custom records. (CR 4110, CCR 5181)
- SPEC1184 DDI History of Changes Report and Icon: (CR 5439, CCRs 6073 and 6151)
 - SPEC1184.1 As a PECS User, I would like to see the history of changes which have been made to the values of each required field on VA Custom Drug-Drug Interaction detail page. (CR 5439, CCRs 6073 and 6151)
- SPEC1208 DDI Submit as Reviewed: (CR 5473, CCR 6193)
 - SPEC1208.1 As a PECS approver, I want to be able to update a Drug-Drug Interaction to Submit as Reviewed when it has associated Drug Pairs in a Reviewed, Approved, or Delete Reviewed status so that the approval process is more efficient. (CR 5473, CCR 6193)
- SPEC1220 Add Comments to FDB DDI Record: (CR 5013,)
 - SPEC1220.1 As a PECS User, I would like the ability to add comments to Drug-Drug Interaction FDB records without customizing them so that I can document relevant information pertaining to specific FDB records. (CR 5013,)

- SPEC1234 Date of Exported DDI Record in the Incremental Update File (CR5013, RTC ID 16641)
 - SPEC1234.1 As a PECS User, I would like to know the most recent date that a record was successfully exported to the incremental update file so that I know when an approved or deleted custom record was sent out to the MOCHA Server for a Drug-Drug Interaction (DDI). (CR5013, RTC ID 16641)
- RRC41076: As a PECS User, I would like to see the reverse FDB Drug-Drug Interaction IDs in the VA results table in a separate column called Reverse FDB Interaction ID, next to the Corresponding FDB Interaction ID, when I query the Drug Pair Lookup tab, Drug Pair Advanced Query and Drug-Drug Interaction Advanced Query. (RTC ID 16509, RM 37303)
- RRC41123: The Clinical Effect Code 2 field shall not be sortable in the DDI tables. (RTC 26698)

Manage Custom Drug Pairs

This section details the functionality for the Drug-Drug Interaction table to map a pair of Routed Generic IDs to a user-defined interaction ID.

- SPEC900: The system shall require the Drug-Drug interaction to be created before a drug pair can be added. (3.6.7.23)
- SPEC901: The system shall provide capability for user to select custom Routed Generic ID 1 from a dropdown list. (3.6.7.24)
- SPEC902: The system shall provide capability for user to select custom Routed Generic ID 2 from a dropdown list. (3.6.7.25)
- SPEC903: The system shall provide a means to add or remove/delete drug pairs while maintaining the approval procedure for Drug Pairs without affecting the Action Status of 'Approved' of the associated Drug interaction record. (3.6.16.2)
- SPEC1002: The system shall provide users with an option to select only limited number of records when selecting Drug Pairs from FDB record to move to VA Custom record. (CR2549)
- SPEC1003: The system shall provide users with an option to select only limited number of records when selecting custom Drug Pairs for review or approval. (CR2549)
- SPEC1106: The system shall provide the user with the ability to open associated FDB and VA DDI records by using the DDI Interaction IDs on the drug pair customization page.
- SPEC1068 Drug Pair Customization (Batch) Information and Error Messages: (CR 4301)
 - SPEC1068.1: As a PECS user, I want the informational and error messages on the Drug Pair Customization (Batch) page to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CR 4301)
- SPEC1141 Drug Pair State Change Notification: (CR5011, CCR 5319)
 - SPEC1141.1 As a PECS Approver, I want to know when a state change is made to a Drug Pair associated with an approved Drug-Drug Interaction so that these Drug Pairs can be reviewed, approved, or deleted. (CR5011, CCR 5319)

- SPEC1145 Null Drug Pair Removal: (CR 5253, CCR 4513)
 - SPEC1145.1 As a PECS administrator, I want the ability to remove drug pairs in which one of the routed generics is NULL from an associated Drug-Drug Interaction so that this cleanup can be performed within PECS as needed. (CR 5253, CCR 4513)
- SPEC1147 Quick Drug Pair Selection: (CR 4363, CCR 5444)
 - SPEC1147.1 As a PECS Approver, I want to be able to check several FDB Drug Pairs to add to a VA Custom Drug-Drug Interaction on the Batch Customization page without having to check every single box so the customizing process is more efficient and less time consuming. (CR 4363, CCR 5444)
- SPEC1127 Customizations Not Allowed on Single Drug Pairs Detail Page: (CR 4507, CCR 5139)
 - SPEC1127.1: As a PECS user, I want the functionality of the Single Drug Pairs Detail Page so that customizations and modifications are no longer allowed on this page. (CR 4507, CCR 5139)
- SPEC1209 Looking Up an FDB Drug Pair: (CR 6196, CCR 5047)
 - SPEC1209.1 As a PECS user, I have queried an FDB drug pair that has these characteristics:
 - a. The drug pair is associated with an FDB DDI that has been customized more than once;
 - b. On all of the older VA customizations, the drug pair has been rejected and/or deleted;
 - c. On the latest VA customization, the drug pair is in the New, Modified, Reviewed, Approved, Delete_Reviewed or Deleted action status.

When I look up an FDB drug pair that has all three traits mentioned above, I want the drug pair displayed on the Drug Pairs Detail Page to be the one associated with the latest VA customization, and I want the drug pair for all of the other VA customizations to be described in informational messages so that I will have more accurate data about the drug pair and the DDIs it is associated with. (CR 6196, CCR 5047)
- SPEC1210 Batch State Changes to Drug Pairs: (CR 6078, CCR 5071)
 - SPEC1210.1 As a PECS user, I want to be able to perform a state change on custom drug pairs in batches so the customizing process is more efficient and less time consuming. (CR 6078, CCR 5071)
- SPEC1212 Search routed generics in DP customization: (CR 3614, CCRs 6232 and 6233)
 - SPEC1212.1 As a PECS user, I want the ability to search the routed generic lists when creating Drug Pairs, so the customization process is more efficient and less time consuming. (CR 3614, CCRs 6232 and 6233)
- SPEC1213 Automatically add DP from routed generic lists: (CR 5089, CCR 6233)
 - SPEC1213.1 As a PECS user, I want to be able to add Drug Pairs from the routed generic lists in an automated manner (instead of adding one Drug Pair at a time), so the customization process is more efficient. (CR 5089, CCR 6233)
- RRC41073: As a PECS User, I want to see Export buttons on the Drug Pair Lookup results tables so that the table data will be documented in a spreadsheet. (RTC 16498)
- RRC41078: As a PECS User, I would like to know the most recent date that a Drug Pairs (DP) concept record was successfully exported to the incremental update file so that I know when an

approved or deleted record was sent out to the MOCHA Server. (RTC 20810, RM33975)

- RRC41104: As a PECS User, I would like the Interaction ID and Description in the following message hyperlinked to the Drug-Drug Interaction record so that I don't have to run a query to find the Drug-Drug Interaction record. "The selected drug pair is also associated with VA Custom Interaction <Interaction ID> - <Interaction Description> with severity level <severity level> and is in the <Rejected|Deleted> action status. (RTC 17574, RRC 41105)
- RRC41110: As a PECS user, I want to see all statuses except Deleted on the Null Drug Pairs report so that I can see which null drug pairs need to be deleted. (RTC 22528)
- RRC41430: As a PECS User, I want a routed generic drug pair that was deleted and then, customized in the reverse order to be listed in the New Action Status and displayed in reverse order in the drug pairs table on the Drug Pairs Customization Page so that information about it will be accurate. (RTC 29246)

Manage Custom Duplicate Therapy

This section details the functionality that will allow the user to associate user-defined information with an FDB duplicate therapy class.

- SPEC904: The system shall pre-populate Category field with "VA". (3.6.7.30)
- SPEC905: The system shall provide a means to update custom duplicate allowance indicator field that is a numeric value of 0, 1, 2, 3, or 4. (3.6.7.32)
- SPEC1060 Duplicate Therapy Detail Pages Information and Error Messages: (CCR 4595)
 - SPEC1060.1: As a PECS user, I want the informational and error messages on the DT Detail Pages to be clear and precise so that I can understand the input PECS expects and the processes that PECS executes. (CCR 4595)
- SPEC1214 Duplicate Therapy History of Changes Report and Icon: (CR 5439, CCRs 5963 and 6077)
 - SPEC1214.1 As a PECS User, I would like to see the history of changes which have been made to the values of each required field on the VA Custom Duplicate Therapy detail page. (CR 5439, CCRs 5963 and 6077)
- SPEC1215 Display FDB Duplicate Therapy Record When FDB Record Selected: (CR 5489, CCR 6235)
 - SPEC1215.1 As a PECS User, I want to display the FDB Duplicate Therapy record when I select the link to a FDB record that has an associated VA Custom record, so that I can see the original FDB source record. (CR 5489, CCR 6235)
- SPEC1222 Add Comments to FDB Duplicate Therapy Record: (CR 5013,)
 - SPEC1222.1 As a PECS User, I would like the ability to add comments to Duplicate Therapy FDB records without customizing them, so that I can document relevant information pertaining to specific FDB records. (CR 5013,)
- SPEC1235 Date of Exported DT Record in the Incremental Update File: (CR 5013, RTC ID 19386)
 - SPEC1235.1 As a PECS User, I would like to know the most recent date that a record was successfully exported to the incremental update file so that I know when an approved

or deleted custom DT record was sent out to the MOCHA Server.(CR 5013, RTC ID 19386)

- RRC41111: As a PECS user, I want to be able to display a duplicate allowance of 3 or 4 on PECS DT FDB records and customize them to a duplicate allowance of 3 or 4 so that the records will stay current with duplicate allowances that are displayed in FDB files. (RTC 23543)

Manage Custom Dose Range

This section details the functionality to define custom Dose Range Check information as well as to map a drug identifier to dosing information. The requirements in this section reference field names and allowable values as provided by FDB.

- SPEC906: The system shall default DXID field to 4892 (DXID type code to identify a Medical Condition). (3.6.7.89)
- SPEC907: The system shall not allow age range parameters to overlap for a given drug. (3.6.7.91)
- SPEC1111: The system shall not allow a user to enter a blank or null value in a dose numeric field when performing a dose range customization. (CR 3849)
- SPEC1066 Dose Range Detail Page Information and Error Messages: (CCR 4623)
 - SPEC1066.1: As a PECS user, I want the informational and error messages on the Dose Range Detail Pages to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CCR 4623)
- SPEC1137 Dose Range Display Improvements: (CR2797, CCR5318)
 - SPEC1137.1 As a PECS user, I would like to improve the display of FDB and VA Custom Dose Range records so the end user has a way to ensure the record for the correct drug is worked on. (CR2797, CCR5318)
- SPEC1149 Dose Range Query: (CR 5317, CCR 5443)
 - SPEC1149.1 As a PECS user, I would like to improve the query and display of FDB and VA Custom Dose Range records so the end user has a way to ensure the record for the correct drug is worked on. (CR 5317, CCR 5443)
- SPEC1216 Dose Range History of Changes Report and Icon: (CR 5439, CCRs 6076 and 4201)
 - SPEC1216.1 As a PECS User, I would like to see the history of changes which have been made to the values of each required field on VA Custom Dose Range detail page. (CR 5439, CCRs 6076 and 4201)
- SPEC1217 Missing Dose Range NTE Values: (CR 5719, CCR 6071)
 - SPEC1217.1 As a PECS User, I would like the Dose Range concept enhanced to support the new Not-to-Exceed values in FDB DIF 3.3 so that the values are available for customization and can be transmitted to MOCHA. (CR 5719, CCR 6071)
- SPEC 1224 Add Comments to FDB DR Record: (CR 5013, RTC ID 16625)

- SPEC1224.1 As a PECS User, I would like the ability to add comments to Dose Range FDB records without customizing them, so that I can document relevant information pertaining to specific FDB records. (CR 5013, RTC ID 16625)
- SPEC1225 Link between FDB and VA Dose Range Detail Pages: (CR 4304, RTC ID 16984)
 - SPEC1225.1 As a PECS User, As a PECS user, I would like a link from the VA Dose Range detail page to the original FDB Dose Range record and vice versa, so that I can easily navigate between the pages. (CR 4304, RTC ID 16984)
- SPEC1237 Date of Exported DR Record in the Incremental Update File: (CR 5013, RTC ID 19388)
 - SPEC1237.1 As a PECS User, I would like to know the most recent date that a record was successfully exported to the incremental update file so that I know when an approved or deleted custom DR record was sent out to the MOCHA Server. (CR 5013, RTC ID 19388)
- RRC41102: As a PECS User, I would like to be able to see the original FDB record when applicable on the history of changes report for VA custom Dose Range records so that I can view the FDB record easily. (RTC 20999)
- RRC41114: As a PECS User, I would like the “record not found” error message popups for the Easy Search Dose Range functionality to be consolidated so that I can read them more easily. (RTC 26485)
- RRC41119: The Concept ID Description field shall not be sortable in the Dose Range tables.

Note: The Concept ID Description field cannot be sorted because sorting is performed at the database level when the data is retrieved and it has to happen in one database query. It takes two database queries to populate the Concept Description in a Dose Range record.
- RRC41180 As a PECS User, I would like the History icons to be displayed on modified fields in a newly customized Dose Range (DR) record so that I will see the differences between the FDB and VA custom DR records. (RTC 29196)

Manage Custom Professional Monographs

This section details the functionality to allow the user to assign user-defined monograph text to existing Framework monograph IDs. The custom messages feature can be used for assigning new text messages to drug concepts.

- SPEC1121 Customized Professional Monograph titles must be unique.
- SPEC921 The system shall insert the following text in the Disclaimer field:

“The information contained in this monograph is intended to supplement the knowledge of physicians, pharmacists, and other healthcare professionals regarding drug therapy problems and patient counseling information. This information is advisory only and is not intended to replace sound clinical judgment in the delivery of healthcare services.”
- SPEC910: The system shall update the “Action Date” with the date when the record was last updated.

- SPEC911: The system shall provide a means to update “Monograph Title” field. (3.6.8.1)
- SPEC912: The system shall retrieve the “severity code and information” from the FDB DIF table. The user has the option to change information that is retrieved from the custom interaction for this field. The stored section code for the field will be “L”. (3.6.8.2)
- SPEC913: The system shall provide a means to update the “Mechanism of Action” field. (3.6.8.3)
- SPEC914: The system shall provide a means to update the “Clinical Effects” field. (3.6.8.4)
- SPEC915: The system shall provide a means to update the “Predisposing Factors” field. (3.6.8.5)
- SPEC916: The system shall provide a means to update the “Patient Management” field. (3.6.8.6)
- SPEC917: The system shall provide a means to update the “Discussion” field. (3.6.8.7)
- SPEC918: The system shall provide a means to update the “Reference” field. (3.6.8.8)
- SPEC919: The system shall predefine the message for the “Disclaimer” field. (3.6.8.9)
- SPEC920: The system shall predefine text for the Copyright field. The text shall state “Information provided by VA PBM-SHG.” (3.6.8.10)
- SPEC1076 Professional Monograph Detail Page Information and Error Messages: (CCR 4626)
 - SPEC1076.1: As a PECS user, I want to see clear and precise information and error messages on the PM Detail Pages so that I can understand the input PECS expects and the processes that PECS executes. (CCR 4626)
- SPEC1139 Forward and Backward Professional Monograph: (CR 3847, CCR 5229)
 - SPEC1139.1 As a PECS approver, I want the ability to associate no more than two Professional Monographs to a single VA Custom Drug-Drug Interaction so that the clinical effect code for the reaction of both the forward and reverse drug interactions is differentiated. (CR 3847, CCR 5229)
- SPEC1218 Professional Monograph History of Changes Report and Icon: (CR 5439, CCRs 6072 and 6152)
 - SPEC1218.1 As a PECS User, I would like to see the history of changes which have been made to the values of each required field on VA Custom Professional Monograph detail page. (CR 5439, CCRs 6072 and 6152)
- SPEC1219 Display FDB Professional Monograph Records when FDB Record Selected: (CR 5489, CCR 6234)
 - SPEC1219.1 As a PECS User, I want to display the FDB Professional Monograph record when I select the link to a FDB record that has an associated VA Custom record, so that I can see the original FDB source record. (CR 5489, CCR 6234)

- SPEC1223 Add Comments to FDB PM Record (CR 5013, RTC ID 14786)
 - SPEC1223.1 As a PECS User, I would like the ability to add comments to Professional Monograph FDB records without customizing them, so that I can document relevant information pertaining to specific FDB records. (CR 5013, RTC ID 14786)
- SPEC1236 Date of Exported PM Record in the Incremental Update File: (CR 5013, RTC ID 19385)
 - SPEC1236.1 As a PECS User, I would like to know the most recent date that a record was successfully exported to the incremental update file so that I know when an approved or deleted custom PM record was sent out to the MOCHA Server. (CR 5013, RTC ID 19385)

2.6.3. Functionality by Roles

This section lists the requirements that apply to PECS roles. It has the requirements that apply to the approver, requestor, administrator, and release manager roles.

Common Functionality

This section lists the common functionality:

- SPEC923: The system shall display to the user the count of reviewed records entered by that user when the user clicks the hyperlink. (3.6.2.4)
- SPEC924: The system shall allow a user to have multiple roles. (3.6.3.7)

Approver Role

This section lists the approver role requirements:

- SPEC925: The system shall provide the user who has been granted the role of Approver a record count summary of records that are pending approval, broken down by business concepts. (3.6.2.1)
- SPEC926: The system shall allow an Approver to provide only one of the two approvals (Review, Approve) on each request. (3.6.2.2)
- SPEC927: The system shall display to the Approver a list of records in the new or modified Action Status pending review when count item is clicked. (3.6.2.5)
- SPEC928: The system shall display to the Approver a list of records in the Action Status of reviewed pending approval when count item is clicked. (3.6.2.5)
- SPEC929 The system shall provide an Approver role to review, approve, delete, modify or reject customization requests (3.6.3.3)
- SPEC930: The system shall provide a means for an Approver to view and review pending requests with an action status of New or Modified.
- SPEC931: The system shall provide a means for an Approver to view and approve pending requests with an Action Status of reviewed. (3.6.10.1)

- SPEC932: The system shall change the Action Status from New or Modified to Reviewed when the Approver submit as Reviewed.
- SPEC933: The system shall change the Action Status from reviewed to approve when the Approver accepts the update. (3.6.10.2)
- SPEC934: The system shall provide a means to batch approve multiple pending records for drug pairs. The selected items must be must be in the Action Status of reviewed, cannot approve multiple drugs in different states. (3.6.10.3)
- SPEC935: The system shall provide a means to batch process multiple pending records for drug pairs. The selected items must be must be in the same Action Status.
- SPEC936: The system shall provide a means to batch apply any action to sets of drug pairs, provided that their status allows that action. The system shall provide the user ID of the last person who updated a record and the date the change was entered. (3.6.10.6)
- SPEC937: The user who approved the customization record shall be able to submit the record for delete.

Requester Role

This section lists the requester role requirements:

- SPEC938: The system shall provide on the home page for a Requester a count of customization requests that the Requester has submitted. (3.6.2.3)
- SPEC939: The system shall allow a Requester role to enter a customization change request. (3.6.3.2)
- SPEC940 Requester shall be able to create a new customization record and modify it before the request is reviewed.
- SPEC941 Requester shall be able to modify a customization record created by others users if the request is with the action status of Approved, Rejected or Deleted.
- SPEC942 Requester shall be able to modify their own record rejected by reviewer and submit for review again
- SPEC943 The Requester role shall now be granted: (CR3316)
 - Access to the Home tab, with the 'My Request History' panel displayed, including Dose Range (DRC) Information with active record counts.
 - Access to the Advanced Query/Customization Tab, allowing selection of 'Both, VA or FDB' Dose Range Table(s).
 - The ability to use Query Builder to perform queries against the Dose Range Table(s) (see Figure 3)
 - The ability to export query results
 - The ability to create a Dose Range Customization (see Figure 4)
 - In addition, the existing security rights established for the Requester role will remain unchanged (see Figure 5)

Administrator Role

This section lists the administrator role requirements:

- SPEC944: The system shall allow only the Administrator role to turn (on/true and off/false) the display and to enter data in any updateable custom table field contained in the Administration tab. (3.6.3.6)
- SPEC945: The system shall allow only the Administrator role to update and maintain approver users in the assigned to field. (3.6.1.19)
- SPEC1151: The system shall allow only the Administrator role to remove null drug pairs. (CR 5233, CCR 4513)

Release Manager Role

SPEC946: The system shall provide a Release Manager role to release the approved customization records in the staging table. (3.6.3.5)

2.6.4. Queries

This section details changes to the system functionality for creating, executing, viewing, and exporting the two categories of queries (MyQueries and OtherUsers). MyQueries are those queries which were created and saved by the user who is currently signed-in. OtherUsers is a query web page section that lists queries that were developed by other users. A user may select and process a query created and saved by another user, this avoids duplication.

The following system functionality will be available for both categories of queries (MyQueries and OtherUsers)

- SPEC947: The system shall provide tab web pages for MyQueries and OtherUsers query specific to a role. (3.6.6.1)

Query Builder

This section lists the query builder requirements:

- SPEC948: The system shall allow user to be able to build and execute queries from the FDB, Custom tables or both. (3.6.6.11)
- SPEC949: The system shall provide a submit function to process the query. (3.6.6.13)
- SPEC950: The system shall allow the user to execute one query at a time from the list of available queries. The lists are available queries in either MyQueries or OtherUser queries web pages that are available to process. (3.6.6.14)
- SPEC951: The system shall provide dropdown list of field names for custom query selections. (3.6.6.20)
- SPEC952 For queries, the system shall provide a constraint/filter field. (3.6.6.21)
- SPEC953 For queries, the system shall provide the following pre-defined constraint options to select in the constraint/filter field based on field type. (3.6.6.22)
 - Equal to
 - Not equal to

- Contains
- Greater than
- Greater than or equal to
- Less than
- Less than or equal to
- Begins with
- Ends with
- SPEC954 For queries, the system shall provide an “and/or” condition set to create complex queries. (3.6.6.24)
- SPEC955: For the OtherUser queries category, the system shall display available custom queries of the last ten created from other users. (3.6.6.18)
- SPEC956: For the OtherUser queries category, the system shall provide the user an option to select and process an available custom query. (3.6.6.19)
- SPEC957: The system shall provide the user the capability to filter (include/exclude) historical records from query results. Note: This option should enable the return of only Active records or the combination of both Active and Historical versions. (CR2479)
- SPEC958: The Requester, Approver and Administrator roles should be allowed to view the historical record's details. (CR2479)
- SPEC959: For Dose Range query the system shall provide a pre-defined search criteria that can be added to a user defined query with default values, following are the pre-defined fields and values (CR3498):
 VA, FDB or VA and FDB search:

Concept Type	=	6	and	
AGEHIGHINDAYS		Greater than or Equal to		6570

 User can add other fields if so desired...
- SPEC960: The system shall provide, for all five concept types, the option to include or exclude Historical records at the point of Querying. This option to include or exclude Historical records will allow the return of ONLY Active records or the combination of BOTH Active and Historical records.
- SPEC1107 For all concepts, the system shall provide the capability to query by action date using the following operators:
 - Equal to
 - Not equal to
 - Greater than or equal to
 - Greater than
 - Less than or equal to
 - Less than
 - The acceptable formats for the action date in the value field shall be YYYYMMDD and YYYY-MM-DD.
- SPEC1080 Query Pages Information and Error Messages: (CCR 4791)

- SPEC1080.1: As a PECS user, I want the informational and error messages on the Query pages to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CCR 4791)
- SPEC1104 New Query Page: (CRs 2471, 2481, 3386)
 - SPEC1104.1 As a user, I want to combine the 'select business concept' and 'query' pages into one query' customization page so that I don't have to go to multiple pages to select a concept and run a query. (CRs 2471, 2481, 3386)

Save Query

This section lists the save query requirements:

- SPEC961: The system shall provide navigation to queries, reports, table updates and application help. (3.6.3.14)
- SPEC962: The system shall place saved custom queries within the Query Manager web page section. (3.6.6.29)
- SPEC963: The system shall provide a means, based on user role, to save a custom query after the custom query is submitted. (3.6.6.28)
- SPEC964: The system shall provide a means to delete a custom query that was created by the user. (3.6.6.27)
- SPEC966: The system shall limit the number of MyQueries a user can save to ten for each of the five business concept. (3.6.6.17)
- SPEC1119: The system shall require a user to enter a name for a query before saving it. (CCR 1991)

Query Results

This section lists the query results requirements:

- SPEC967: The system shall return Query table results which include both Active and Historical records when historical records option is selected.
- SPEC968: The system shall allow the user to select from the results of a query. (3.6.6.2)
- SPEC969: The system shall provide the record type associated with the query. (3.6.6.5)
- SPEC970: The system shall provide a descriptive field name established from the Administration tab on the column headings for the query result. (3.6.6.6)
- SPEC971: The system shall provide sort (ascending, descending) functionality for each of the resulting columns. The system shall sort the complete dataset. (3.6.6.10)
- SPEC1112:: The system shall give the user the option to clear all query fields after he/she has performed a query. (CR 3386)
- SPEC972: The system shall display the table source, FDB or Staging, of the query being processed. (3.6.6.12)
- SPEC973: The system shall allow the user to open the record by clicking on the hyperlink provided as part of each record. Note: This requirement will replace the

existing PECS v1.0 requirement to provide a radio button to select a record and then click on OPEN button to display the details. (CR2480)

- SPEC974: Historical records cannot be modified; historical records are read-only. (CR2480)
- SPEC975: For Drug-Drug Interactions and Drug Pairs, the querying and subsequent search results should include both combinations of drugs irrespective of the sequence the drugs were entered into the query 'Interaction Description' for Drug-Drug Interactions and 'Routed Generic #1' and 'Routed Generic #2' for Drug Pairs.
- SPEC976: The system shall provide the capability for the user to export any query results.
- SPEC1110: The system shall allow a user to create a customization record from a blank form only after searching for both FDB and VA records. (CR 3701)

Export Query Results

This section lists the export query results requirements:

- SPEC977: The system shall provide the capability for the user to export any query results to Microsoft Excel. (3.6.6.8)
- SPEC1082: Exporting result set up to 10,000 rows: (CR 4268)
 - SPEC1082.1: As a PECS user, I want to be able to export results sets up to 5000 rows for the Dose Range concept and up to 10,000 rows for all other concepts so that I can further manage large chunks of PECS data. (CR 4268, RRC 40119)

2.6.5. Display Detail Record (Data Entry Screen)

This section lists the display detail record requirements:

- SPEC978: The system shall open the Historical record (deleted text) in read-only mode. Historical records cannot be modified.
- SPEC979: The system shall provide a simple method to return to the Query results table from the Historical and Active record's detail pages.
- SPEC980: The system shall populate data entry field's page when the user clicks on the hyperlink provided as part of the record. (3.6.6.4)

Print

SPEC981: The system shall provide the option to 'print' both Historical and Active records' detail pages.

2.6.6. Easy Search Specifications (CHECK POSITION)

This section lists the specifications for PECS Easy Search below:

- SPEC1072: Professional Monograph Combination Data: (CR 3812)
 - SPEC1072.1: As a user of PECS Easy Search, if chosen, I want to see Professional Monograph data returned for the Routed Generics I have selected so that I have an easy way to quickly view this data. (CR 3812)
- SPEC1074: Dose Range Check: (CR 3812)

- SPEC1074.1: As a user, I want to enter patient and dose particulars for the drug I have selected so that I can ensure the amount being prescribed is an acceptable amount. (CR 3812)
- SPEC1090: Drug-Drug Interaction, Duplicate Therapy or Professional Monograph displayed: (CR 3812)
 - SPEC1090.1: As a user of PECS Easy Search, I want to be able to select whether to see Drug-Drug Interaction and Professional Monograph info and/or Duplicate Therapy information separately or together for chosen drugs so that I do not have to run separate queries within PECS. (CR 3812)
- SPEC1092: Drug Selection: (CR 3812)
 - SPEC1092.1: As a user of PECS Easy Search, I want to be able to search for one to ten drugs to see combination data for so that I do not have to run separate queries within PECS. (CR 3812)
- SPEC1094: Drug-Drug Interaction Combination Data: (CR 3812)
 - SPEC1094.1: As a user of PECS Easy Search, I want to see Drug-Drug Interaction data returned for the drugs I have selected so that I have an easy way to quickly view this data. (CR 3812)
- SPEC1098: Duplicate Therapy Combination Data: (CR 3812)
 - SPEC1098.1: As a user of PECS Easy Search, if chosen, I want to see Duplicate Therapy data returned for the drugs I have selected so that I have an easy way to quickly view this data. (CR 3812)
- SPEC1100: Therapeutic Drug Class: (CR 3812)
 - SPEC1100.1: As a user, I want to have the Therapeutic Drug Class displayed for each drug returned by the PECS Easy Search query so that I do not have to search in another tool to find the drug's therapeutic class(es). (CR 3812)
- SPEC1211: Report of the DPs and associated interactions for a dispensable drug: (CR 5028, CCR 6150)
 - SPEC1211.1: As a PECS developer, I would like to develop a user interface that allows the user to produce a report that lists the drug pairs and their associated interactions for a dispensable drug so that the user can find this information in a single location. (CR 5028, CCR 6150)

2.7. Graphical User Interface (GUI) Specifications

This section lists the GUI requirements:

- SPEC982: The system shall provide a method to navigate from the detail page, back to the originating Query table results screen.
- SPEC983: The system shall provide a means to cancel out of a transaction process. (3.6.3.19)
- SPEC984: The system shall provide the ability for the user to determine an item is a hyperlink. (3.6.1.18)
- SPEC985: The system shall provide a means to gracefully exit the application. (3.6.1.1)
- SPEC986: The system shall display a message stating "Page Loading Please Wait" while data is being loaded on the page, so that the user cannot perform next function. (CR3383)

- SPEC987: The system shall display associated descriptive information to the user for fields that have codes or abbreviated field information.

2.7.1. Home Page

This section lists the Home Page requirements:

- SPEC988: The system shall display the application Home web page after the successful login. (3.6.3.10)
- SPEC989: The system shall provide a panel for all requests based on role. (3.6.2.13)
- SPEC990: The system shall provide a hyperlink to query results for each table within each panel based on role. (3.6.2.14)
- SPEC991: The system shall provide a summary count based on record's Action Status within each panel based on role and panel. (3.6.2.15)
- SPEC1153: The system shall provide an approver with the summary count based on the Action Status of drug pairs associated with approved Drug-Drug Interactions. (CR 5011, CCR 5319)

My Request History

This section lists the My Request History requirements:

- SPEC992: The system shall provide a panel for my request history based on role. (3.6.2.8)
- SPEC1108: For each concept, the system shall: (CR 2523)
 - Provide separate links to display active records in each status (New, modified, reviewed, approved, rejected and deleted records). (CR 2523)
 - Display the number of active records for each status. (CR 2523)
 - The modified link shall include active records with a status of modified, modified after approved, and modified after delete. (CR 2523)
 - The reviewed link shall include active records with a status of reviewed, reviewed after approved, reviewed after delete, and delete reviewed. (CR 2523)

My Assigned Requests for Review

This section lists the My Assigned Requests for Review requirements:

- SPEC993: "My assigned requests for review" should only show records that pertain to the user currently signed on. (CR3630)
- SPEC994: The system shall provide a panel for my assigned request for review based on role. (3.6.2.9)

My Assigned Requests for Approval

This section lists the My Assigned Requests for Approval requirements:

- SPEC995: "My assigned requests for approval" should only show records that pertain to the user currently signed on. (CR3630)
- SPEC996: The system shall provide a panel for my assigned requests for approval based on role. (3.6.2.10)

My Assigned Requests for Deletion

This section lists the My Assigned Requests for Deletion requirements:

- SPEC997: “My assigned requests for deletion” should only show records that pertain to the user currently signed on. (CR3630)
- SPEC998: The system shall provide a panel for my assigned requests for deletion based on role. (3.6.2.11)

Unassigned Requests

SPEC999: The system shall provide a panel for unassigned requests based on role. (3.6.2.12)

All Requests

This section lists the All Requests requirements:

- SPEC1000: The system shall provide a panel for all requests in different Action Status.
- SPEC1109: For each concept, the system shall: (CR 2523)
 - Provide separate links to display active records in each status (New, modified, reviewed, approved, rejected, and deleted records). (CR 2523)
 - Display the number of active records for each status. (CR 2523)
 - The modified link will include active records with a status of modified, modified after approved, and modified after delete. (CR 2523)
 - The reviewed link will include active records with a status of reviewed, reviewed after approved, reviewed after delete, and delete reviewed. (CR 2523)

2.7.2. Advanced Query/Customization Page

SPEC1001: The system shall provide all users the ability to query for business concepts one at a time and display the results in separate tables, i.e., a VA Customization table and an FDB table.

2.7.3. Drug Pair Lookup Page

This section lists the Drug Pair Lookup Page requirements:

- SPEC1113: The system shall not allow a user to customize a drug pair from a blank form. (CR 4517)
- SPEC1070: Drug Pair Lookup Tab/Query Information and Error Messages: (CR 4301)
 - SPEC1070.1: As a PECS user, I want the informational and error messages on the Drug Pair Lookup page to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CR 4301)
- SPEC1117: The labels on the Drug Pair Lookup Page shall be: (CCR 4679)
 - Drug A (Generic)
 - Drug B (Generic)
- SPEC1118: After a search has been performed on the Drug Pair Lookup page and a record has been selected and opened, clicking the browser's 'Back' button will return the user to the same search results set they just navigated from.

2.7.4. Reports Page

This section details the PBM report files that will be created in the application. The intended report files are not designed for paper reporting, but to allow the report files to be exported to a separate outside application tool such as a spreadsheet. This tool can be used for filtering, managing, viewing and reporting the data.

- SPEC1004: The system shall provide a customization report file. The report file shall provide customization records that have been entered regardless of status against the FDB DIF standard reference data. (3.6.11.1)
- SPEC1005: The system shall create a separate report file for each of the five business concepts. (3.6.11.2)
- SPEC1006: The system shall report all the GUI displayable customization columns followed by those corresponding FDB DIF standard reference record. Displayable are the fields that are presented to the user for possible modification. Please note: The columns table names between FDB DIF standard and staging table may not match. (3.6.11.4)
- SPEC1114: The system shall report the alias name and not the table column name in the PECS reports. (CR 4120)
- SPEC1007: The system shall provide a report where the drug interaction does not have an associated Professional Monograph. The report should display (3.6.16.7)
 - Interactionid
 - Interaction description
 - Monograph ID
- SPEC1008: The system shall provide a report when one of the drugs in a pair was removed from the FDB database. The report shall display (3.6.16.6)
 - Interactionid
 - Interaction description
 - Rtgenid1_desc
 - Rtgenid2_desc
- SPEC1086: Reports Page Information and Error Messages: (CR 4301)
 - SPEC1086.1 As a PECS administrator or approver, I want the informational and error messages on the Reports Pages to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CR 4301)
- SPEC1129: Duplicate Therapy Comparison Report: (CR 2438, CCR 5232)
 - SPEC1129.1: As a PECS user in an appropriate role, I want a report that shows the changes to existing Duplicate Therapy (DT) records that were contained in the latest incremental update. (CR 2438, CCR 5232)
- SPEC1135: Redesigned Reports Page: (CR 2438, CCR 5230)
 - SPEC1135.1 As a PECS feature team member, I want to redesign the reports page so that the users have access to the FDB comparison reports. (CR 2438, CCR 5230)
- SPEC1143: DDI-DP FDB Comparison Report: (CR 2438, CCRs 5316 and 5442)

- SPEC1143.1 As a PECS Approver/Administrator, I want a report that displays the differences between the Drug-Drug Interaction/Drug Pair record on file in PECS and the latest incremental FDB update, so that I can determine which changes need to be made to the VA custom record. (CR 2438, CCRs 5316 and 5442)
- SPEC1238: DR FDB Comparison Report: (RTC ID 16514)
 - SPEC1238.1 As a PECS Approver or Administrator, I want a report that displays the differences between the FDB and VA custom Dose Range record on file in PECS and the latest incremental FDB update, so that I can determine which changes need to be made to the VA custom record. (RTC ID 16514)

2.7.5. Help

This section lists items regarding to the help system:

- SPEC1009: The system shall have a help section to assist the user with the application. (3.6.1.2)
- SPEC1010: The system shall provide user help on each of the data entry fields. (3.6.1.3)
- SPEC1011: The system shall provide in the online help a table of contents related to the topics. (3.6.12.1)

2.7.6. Administration Tab

This section lists the Administration Tab requirements:

- SPEC1012: The system shall allow only the Administrator role to turn (on/true and off/false) the display and to enter data in any updateable custom table field contained in the Administration tab. (3.6.3.6)
- SPEC1013: The system shall provide a means to control whether individual table fields are visible or not visible within the application. (3.6.9.1)
- SPEC1014: The system shall provide a table list selection. (3.6.9.2)
- SPEC1015: The system shall display all the columns available for display on a web page for a table that was selected. (3.6.9.3)
- SPEC1016: The system shall display the current status of each data field (visible/not visible). (3.6.9.4)
- SPEC1017: The system shall display the column description of each data field. (3.6.9.5)
- SPEC1018: The system shall display the visible fields to all application users. (3.6.9.6)
- SPEC1019: The system shall provide a save function for a field switch in order to make a table field visible to all application users. (3.6.9.7)
- SPEC1020: The system shall provide a confirmation message prior to saving the changes. (3.6.9.8)
- SPEC1088: Administrator Page Information and Error Messages: (CR 4301)

- SPEC1088.1: As a PECS administrator, I want the informational and error messages on the Administrator page to be clear and precise so that I understand the input PECS expects and the processes that PECS executes. (CR 4301)

2.7.7. Contact Us Tab

This section lists requirements for the Contact Us tab:

- SPEC1226: PECS Editable Contact List: (CR 4303, RTC ID 16949)
 - SPEC1226.1 As a PECS User, I would like an editable contact list available in PECS, so that I know who to contact when I have questions about the application. (CR 4303, RTC ID 16949)

2.8. Multi-divisional Specifications

N/A

2.9. Performance Specifications

This section lists the performance specifications below:

- SPEC838: Total Number of Users by Role
 - Administrator: Five
 - Approver: Twenty
 - Requestor: 10 per medical center (1280) (or potentially all VA clinical employees)
 - Release Manager: Five
- SPEC839: Number of Concurrent Users by Role
 - Administrator: One
 - Approver: Five
 - Requestor: Three per medical center (384)
 - Release Manager: One
- SPEC1120: Number of users, worst case scenario
 - 128 VMS facilities (defined as VistA instance)
 - 10 users / facility
 - 5 concurrent / facility
 - Facilities are open from 7:00 am eastern to 7:00 pm eastern
- SPEC840: Response Time:
 - Submitting / approving request: Five seconds
 - Running queries: Five seconds or less
 - Creating custom file: Five minutes or less
- SPEC841: Usage peak times: Monday through Friday, 7:00 a.m. Eastern Time – 7:00 p.m. Eastern Time
- SPEC842: Maximum number of customization request (estimated):

- Daily: 3
- Weekly: 15
- SPEC843: The system shall allow 30 minutes idle time prior to time out of the application. If the system has been idle for 28 minutes, the following message shall appear: Your PECS session will end in two minutes. An OK button shall appear with the message. If the OK button is clicked and then a hyperlink or tab on the page is clicked within the two minute warning, the application shall continue to run. If the OK button is clicked but a hyperlink or tab on the page is not clicked within the two minute warning, the application shall time out. If the OK button is not clicked within the two minute warning, the application shall time out. (3.6.3.12)
- SPEC1125: Distribution on business functions:
 - Querying for Drug-Drug Interactions (DDI) info (10/hour/site)
 - Querying for Drug Pairs (DP) (5/hour/site)
 - Drug Pair Lookup query (5/hour/site)
 - Querying for Professional Monograph (PM) info (5/hour/site)
 - Querying for Duplicate Therapy (DT) info (3/hour/site)
 - Querying for Dose Range info (3/hour/site)
 - Open a custom Drug-Drug Interaction record in the detail screen and open the list of associated drug pairs (4/hour/site)
 - Open an FDB VA Drug-Drug Interaction record in the detail screen (4/hour/site)
 - Open a custom Drug Pair record in the detail screen (4/hour/site)
 - Open an FDB Drug Pair record in the detail screen (4/hour/site)
 - Open a custom Professional Monograph record in the detail screen (2/hour/site)
 - Open an FDB Professional Monograph record in the detail screen (2/hour/site)
 - Open a custom Duplicate Therapy record in the detail screen (1.2/hour/site)
 - Open a FDB Duplicate Therapy record in the detail screen (1.2/hour/site)
 - Open a custom Dose Range record in the detail screen (1.2/hour/site)
 - Open an FDB Dose Range record in the detail screen (1.2/hour/site)

2.10. Quality Attributes Specification

N/A

2.11. Reliability Specifications

SPEC1021: The system shall be available 24/7, with exception made for required system maintenance activities. Required maintenance activities shall be scheduled for known periods of decreased system utilization. (3.6.1.15)

2.12. Scope Integration

N/A

2.13. Security Specifications

- SPEC1025: System accessibility and permissions will be role based using KAAJEE as the security application. (3.6.3.1)

- SPEC1024: The system shall provide a login web page to enter access code and verify code for authorization to the customization application. (3.6.3.8)
- SPEC1023: The system shall not allow a user to delete other users query. (3.6.3.11)

2.13.1. Access Control

Menu Tab

	Requester	Approver	Release Manager	Administrator
Home	X	X	X	X
Advanced Query/Customization	X	X	X	X
Drug Pair Lookup	X	X		
Administration				X
Reports		X		X
Custom Updates			X	
Help	X	X	X	X
Contact Us	X	X	X	X

Advanced Query/Customization/My Queries

	Type	Requester	Approver	Release Manager	Administrator
Run A Saved Query	Panel	X	X	X	X
Save	Button	X	X	X	X
Delete	Button	X	X	X	X
Query Builder	Panel	X	X	X	X
AND	Button	X	X	X	X
OR	Button	X	X	X	X
Clear	Button	X	X	X	X
Query	Button	X	X	X	X
Query Result	Panel	X	X	X	X
Load	Button	X	X		

Advanced Query/Customization/Other User's Queries

	Type	Requester	Approver	Release Manager	Administrator
Run A Saved Query	Panel	X	X	X	X
Query Result	Panel	X	X	X	X
Load	Button	X	X		

Custom Updates

	Type	Requester	Approver	Release Manager	Administrator
Download Existing Update	Button			X	
Create New Update	Button			X	

Administration

	Type	Requester	Approver	Release Manager	Administrator
Save	Button				X
Cancel	Button				X
Null Drug Pair Removal	Button				X

Contact Us

	Type	Requester	Approver	Release Manager	Administrator
Edit	Button				X
Cancel	Button				X

Order Check Wizard

	Type	Requester	Approver	Release Manager	Administrator
Modify	Button	X	X		
Open Blank Form	Button	X	X		
Open	Button	X	X		
Customize	Button	X	X		
Reject	Button	X	X		
Approve	Button		X		
Submit For delete	Button		X		
Submit As Reviewed	Button		X		
Delete	Button		X		
Reject Delete	Button		X		
Drug Pairs (Interactions Wizard Only)	Button	X	X		

2.14. System Features

N/A

2.15. Usability Specifications

N/A

3. Applicable Standards

Applicable standards are captured in Section 2.3 Design Constraints Specifications

4. Interfaces

This section lists the requirements for PECS interfaces. Communication, hardware, software and user interface requirements will be described.

4.1. Communications Interfaces

Since the application is hosted at AITC all the communications with other devices such as local area networks are captured in AITC's ACP document

Communications with other systems are documented as part of the logical and physical model in the PECS Product Architecture Document, the PECS System Design Document, and the PECS Interface Control Document.

4.2. Hardware Interfaces (REDO Table)

Firmware/Hardware

Manufacturer	Version Number	Device Installed On
Dell	PowerEdge R710	Application Server
Dell	PowerEdge R710	Database Server
Dell	PowerEdge R710	Failover Server

4.3. Software Interfaces

Software

Manufacturer	Software Name	Use (i.e. OS, Database)	Version Number	License Information
Red Hat	Red Hat Enterprise Linux	OS		VA Enterprise License
Oracle	Oracle	Database	10.2.0.4.3	VA Enterprise License(generic)
Oracle	WebLogic	Application SW	10.3.2	VA Enterprise License(generic)

4.4. User Interfaces

PECS is a GUI application that was developed for maintenance of FDB custom tables.

5. Legal, Copyright, and Other Notices

N/A

6. Purchased Components

PECS application is hosted by AITC, all the purchased components are listed in AITC ACP document.

6.1. Defect Source (TOP 5) NEW

7. User Class Characteristics

N/A

8. Estimation

The function point count chart on the next page provides the estimates for this project.

Note: This document was signed with only this early version of the Function Point Counts.

8.1. Function Point Analysis Results Table

Project Software Functional Size and Size-Based Effort and Duration Estimate

Application

Item	A	B	C	D	E	Total
Counted Function Points						
Estimated Scope Growth						
Estimated Size at Release						

Size-Based Effort Estimates	Labor Hours	Probability
Low-Effort Estimate – With indicated probability, project will consume no more than:		
High-Effort Estimate – With indicated probability, project will consume no more than:		

Size-Based Duration Estimates	Work Days	Probability
Low-Duration Estimate – With indicated probability, project will consume no more than:		
High-Duration Estimate -- With indicated probability, project will consume no more than:		

Figure 1: Cumulative Probability (“S-curve”) Chart

[Insert Cumulative Probability (“S-curve”) Charts here]

9. Approval Signatures

REVIEW DATE: December 2014

SCRIBE: [REDACTED]

Signed:

[REDACTED]

Signed:

[REDACTED]

Signed:

[REDACTED]

