VistA Build Analyzer Utility

Kernel Patch XU*8.0*782

User Guide

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1 Introduction

The VistA Build Analyzer utility (aka Build Analyzer) assists developers and software quality assurance (SQA) in preparing and reviewing a new Veterans Health Information Systems and Technology Architecture (VistA) patch.

This utility analyzes all of the components included in a Kernel Installation and Distribution System (KIDS) build. It provides an assessment based on standards and best practices.

The Build Analyzer is primarily run in a Development or SQA Test accounts to verify a build meets standards prior to release into a Production account. However, it can also be run in a Production account to review an already released build to verify if any issues arise after release to confirm any build discrepancies.

The VistA Build Analyzer utility includes the **Build Analyzer Main Menu** [XPDANLYZ MAIN MENU] with the following options and actions:"

- **KIDS Build Analyzer** [XPDANLYZ] and the following actions:
  - **Print the Report**
  - **Create the Report in .TXT Files**
  - **Send the Report in MailMan Messages**

- **Delete Build Analyzer Text Files** [XPDANLYZ_DEL].
- **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] and the following actions:
  - **Print the Report**
  - **Create the Report in .TXT Files**
  - **Send the Report in MailMan Messages**

REF: These options and actions are described in Section 2, "Using the VistA Build Analyzer.

This tool was created to help maintain constancy between developers and catch simple errors prior to submitting a patch for further reviews. The VistA Build Analyzer utility will be continuously improved to maintain conventions and speed reviews of new VistA patches.

2 Using the VistA Build Analyzer

2.1 Build Analyzer Main Menu

To access the VistA Build Analyzer utility, do the following (Figure 1):

1. Select the **Programmer Options** [XUPROG] menu.
2. Select the **Kernel Installation & Distribution System** [XPD MAIN] menu.
3. Select the **Utilities** [XPD UTILITY] menu.
4. Select the **Build Analyzer Main Menu** [XPDANLYZ MAIN MENU].

Figure 1: Accessing the Build Analyzer Main Menu [XPDANLYZ MAIN MENU]—System Prompts and User Entries

```
          Core Applications ...
          Device Management ...
   FM     VA FileMan ...
          Menu Management ...
          Programmer Options ...
          Operations Management ...
          Spool Management ...
          Information Security Officer Menu ...
          Taskman Management ...
          User Management ...
          Application Utilities ...
          Capacity Planning ...
          Manage Mailman ...


Select Systems Manager Menu <TEST ACCOUNT> Option: PROG <Enter> rammer Options


   KIDS   Kernel Installation & Distribution System ...
   NTEG   Build an 'NTEG' routine for a package
   PG     Programmer mode
          Calculate and Show Checksum Values
          Delete Unreferenced Options
          Error Processing ...
          Global Block Count
          List Global
          Map Pointer Relations
          Number base changer
          Routine Tools ...
          Test an option not in your menu
          Verifier Tools Menu ...


Select Programmer Options <TEST ACCOUNT> Option: KIDS <Enter> Kernel Installation &
Distribution System


          Edits and Distribution ...
          Utilities ...
          Installation ...
          Patch Monitor Main Menu ...
```

```
Select Kernel Installation & Distribution System <TEST ACCOUNT> Option: UTIL <Enter>
ities
```

The display order and list of menu options can vary from site to site. It depends on site settings and the security keys assigned to the user.

```
          Build Analyzer Main Menu ...
          Build File Print
          Convert Loaded Package for Redistribution
          Display Patches for a Package
          Edit Install Status
          Install File Print
          Purge Build or Install Files
          Rollup Patches into a Build
          Update Routine File
          Verify a Build
          Verify Package Integrity

Select Utilities <TEST ACCOUNT> Option: BUILD AN <Enter> alyzer Main Menu


   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option:
```

2.2 KIDS Build Analyzer Option

Use the **KIDS Build Analyzer** [XPDANLYZ] option (Figure 2) to analyze the build components to identify adherence to standards and best practices.

Figure 2: Running the KIDS Build Analyzer [XPDANLYZ] Option—System Prompts and User Entries

```
Select Build Analyzer Main Menu <TEST ACCOUNT> Option: KIDS
    1    KIDS Build Analyzer
    2    KIDS Build Analyzer - Full SQA Search
CHOOSE 1-2: 1 <Enter> KIDS Build Analyzer


This tool is used to analyze the components of a build to identify adherence to
standards and best practices.
```

Enter the VistA build name as it appears in the BUILD (#9.6) file. Sometimes, KIDS has a backup of a patch, which is indicated by a lowercase "b" following the patch ID (e.g., XU*8.0*688b); so, it is best to always select the *non*-backup build.

```
Select Build Name: XU*8*688
     1   XU*8*688        KERNEL
     2   XU*8*688b       KERNEL
CHOOSE 1-2: 1 <Enter> XU*8.0*688 KERNEL
```

The "Namespace" value is displayed from the first piece of the build name.

```
Namespace: XU
Package: KERNEL
```

The "Package" value is displayed if it is listed in the BUILD (#9.6) or PACKAGE (#9.4) file.

```
Do you want to include a section that displays the routine lines containing
specific code references reviewed on the SQA checklist? NO// <Enter>

Do you want to include a section that displays the component descriptions
and text found in routines? NO// <Enter>

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3):
```

2.2.1 Analysis Results Display Choices

The **KIDS Build Analyzer** [XPDANLYZ] option provides the following actions to view or save the report output (Figure 2):

1. **Print the Report**—Output displayed to the screen (Default: **HOME**) or other specified device.
2. **Create the Report in .TXT Files**—Output sent to separate text files.
3. **Send the Report in MailMan Messages**—Output sent to email messages.

If the user chooses to see the lines with Software Quality Assurance (SQA) references or review component descriptions and text found in routines, they will be packaged in the same format as chosen with these actions.

2.2.2 Incorrect or Missing Build

If the PACKAGE NAMESPACE OR PREFIX (#23) Multiple field of the BUILD (#9.6) file is *not* **NULL** and if the build does *not* include the namespace obtained from the first part of the build name; you will see the warning shown in Figure 3:

Figure 3: Sample Warning Message—Build Namespace Missing or Inconsistent

```
Select Build Name: ZZ*1.0*1

*** Warning: BUILD namespace not consistent with PACKAGE NAMESPACE OR
PREFIX (#23) field of BUILD file.
```

2.2.3 Print the Report Action

If the "**Print the Report**" action is selected in Figure 2, the user is prompted for a "Device", as shown in Figure 4:

Figure 4: Print Analysis Report—Sample Dialog to Choose a Device

```
Print Analysis to which Device:   HOME//
```

If you choose to display the whole report without breaks (e.g., "HOME// **;;9999999**"), then you will get all data scrolling on the screen. If it is a large build, this could be a lot of data and the pause above at the "Print" prompt should be used to set up to log the display into a text file. If you just accept the "HOME//" default, it will display one screen at a time for your review.

2.2.3.1 No SQA Checklist Items, Component Descriptions, or Routine Text

Figure 5 shows the results when answering **NO** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then using the **Print the Report** action to see the report:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **NO**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **NO**

Figure 5: Running the "KIDS Build Analyzer" Option: "Print the Report" Action: No SQA Checklist Items, Component Descriptions, or Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu


   1       KIDS Build Analyzer
   2       Delete Build Analyzer Text Files
   3       KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.


Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL


Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// NO


Do you want to include a section that displays the component descriptions
and text found in routines? NO// NO

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 1 <Enter>  . . .


Print Analysis to which Device:   HOME// ;;9999999  TELNET PORT    Right Margin:
 80// <Enter>
```

Figure 6 shows the results from the **Print the Report** action from the **KIDS Build Analyzer** option *without* including SQA checklist items, component descriptions, and routine text:

Figure 6: Reviewing the "Print the Report" Action Results—Output *without* SQA Checklist Items, Component Descriptions, and Routine Text

```
XU*8.0*688 BUILD OVERVIEW                                  Jan 25, 2023@07:14:24
------------------------------------------------------------------------------
APPLICATION ACTION                    Not Included
BULLETIN                              Not Included
DIALOG                                Not Included
ENTITY                                Not Included
FILES                                 Included
FORM                                  Not Included
FUNCTION                              Not Included
HELP FRAME                            Not Included
HL LOGICAL LINK                       Not Included
HL7 APPLICATION PARAMETER             Not Included
HLO APPLICATION REGISTRY              Not Included
INPUT TEMPLATE                        Not Included
LIST TEMPLATE                         Not Included
MAIL GROUP                            Not Included
OPTION                                Not Included
PARAMETER DEFINITION                  Not Included
PARAMETER TEMPLATE                    Not Included
POLICY                                Not Included
POLICY FUNCTION                       Not Included
PRINT TEMPLATE                        Not Included
PROTOCOL                              Not Included
REMOTE PROCEDURE                      Not Included
ROUTINE                               Included
SECURITY KEY                          Not Included
SORT TEMPLATE                         Not Included
XULM LOCK DICTIONARY                  Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:
```

```
 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date of Last ^XINDEX: JAN 24, 2023

                           <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================


Press <Enter> or '^' to exit:
```

2.2.3.2 Including SQA Checklist Items, Component Descriptions, and Routine Text

Figure 7 shows the results when answering **YES** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then using the **Print the Report** action to see the report:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **YES**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **YES**

Figure 7: Running the "KIDS Build Analyzer" Option: "Print the Report" Action: Including SQA Checklist Items, Component Descriptions, and Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu


   1       KIDS Build Analyzer
   2       Delete Build Analyzer Text Files
   3       KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer


This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.


Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL


Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// YES


Do you want to include a section that displays the component descriptions
and text found in routines? NO// YES

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 1 <Enter> . . .


Print Analysis to which Device:   HOME// ;;9999999  TELNET PORT    Right Margin:
 80// <Enter>
```

Figure 8 shows the results from the **Print the Report** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

Figure 8: Reviewing the "Print the Report" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text

```
XU*8.0*688 BUILD OVERVIEW                                  Jan 25, 2023@07:18:04
-------------------------------------------------------------------------------
APPLICATION ACTION                    Not Included
BULLETIN                              Not Included
DIALOG                                Not Included
ENTITY                                Not Included
FILES                                 Included
FORM                                  Not Included
FUNCTION                              Not Included
HELP FRAME                            Not Included
HL LOGICAL LINK                       Not Included
HL7 APPLICATION PARAMETER             Not Included
HLO APPLICATION REGISTRY              Not Included
INPUT TEMPLATE                        Not Included
LIST TEMPLATE                         Not Included
MAIL GROUP                            Not Included
OPTION                                Not Included
PARAMETER DEFINITION                  Not Included
PARAMETER TEMPLATE                    Not Included
POLICY                                Not Included
POLICY FUNCTION                       Not Included
PRINT TEMPLATE                        Not Included
PROTOCOL                              Not Included
REMOTE PROCEDURE                      Not Included
ROUTINE                               Included
SECURITY KEY                          Not Included
SORT TEMPLATE                         Not Included
XULM LOCK DICTIONARY                  Not Included

Package File link: KERNEL
-------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
-------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
-------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:
```

```
 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date of Last ^XINDEX: JAN 24, 2023

                           <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================

ALL ^XTMP calls have zero nodes defined in this build's routines

XUSER3

 ^( ..........................................................................
   VALN1DEA +8  I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
               EN^DDIOL($C(7)_"Provider DEA number is already associated to
               another profile. Please check the number entered.") K X


Descriptions and other text associated with this build (for review and
spell check):


BUILD: XU*8.0*688
See FORUM Patch description.


FILE: NEW PERSON

SUBFILE 200.5321; FIELD: .01: DEA NUMBER
This field is used to enter the provider's Drug Enforcement Administration
(DEA) number(s). Enter the DEA number as two upper case letters followed
by 7 digits. e.g., AA1234567.
HELP-PROMPT:
Enter DEA number in the format 2 upper case letters followed by 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number

FIELD: 53.2: DEA#
This field is used to enter the Drug Enforcement Agency (DEA) number.
Enter the DEA number as two upper case letters followed by 7 digits.
e.g., AA1234567.
HELP-PROMPT:
Enter the DEA number 2 letters 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number
HELP-PROMPT: missing.


FILE: DEA BUSINESS ACTIVITY CODES
The DEA BUSINESS ACTIVITY CODES FILE is associated with the DEA numbers
and provider information in the DEA NUMBERS file.  This file links a
provider with the type of service provided.  It contains BUSINESS
ACTIVITY CODES that are supplied by the DOJ/DEA web service.
```

```
Field - BUSINESS ACTIVITY (#.02):
Description:
    This field holds the Business Activity value used for DEA numbers. This
    value can currently be one of the following:
    A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,S,T or U

    This value, combined with a numeric business sub-type, categorizes a DEA
    number.
Help-Prompt:
    Enter the Business Activity value for used for DEA numbers. Answer must
    be 1-3 characters in length.

Field - BUSINESS ACTIVITY DESCRIPTION (#1):
Description:
    This is the description given for the Business Activity Code and Sub-code.
Help-Prompt:
    Enter the Business Activity description given for the Business Activity
    code and Business Activity Sub-code. Answer must be 3-60 characters in length.

Field - BUSINESS ACTIVITY SUB-CODE (#.03):
Description:
    DEA uses an alpha character business activity code to identify various
    categories of registrants. For example business activity code "C"
    indicates a "Practitioner". DEA added a business activity sub-code field
    to identify new sub-categories of registrants.
    For example business activity code "C" in combination with business
    activity sub-code "1" indicates a practitioner who has received a Drug
    Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
    office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
    DW/275). As new sub-categories of business activities become regulated,
    additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
    assigned. MLP = Mid-Level Practitioner. NG = National Guard
Help-Prompt:
    Enter the business activity sub-code associated with the Business
    Activity Code. Answer must be 1-3 characters in length.

Field - FULL BUSINESS ACTIVITY CODE (#.01):
Description:
    DEA uses an alpha character business activity code to identify various
    categories of registrants. For example business activity code "C"
    indicates a "Practitioner". DEA added a business activity sub-code field
    to identify new sub-categories of registrants.
    For example business activity code "C" in combination with business
    activity sub-code "1" indicates a practitioner who has received a Drug
    Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
    office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
    DW/275). As new sub-categories of business activities become regulated,
    additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
    assigned. MLP = Mid-Level Practitioner. NG = National Guard.
Help-Prompt:
    Enter the full business activity code. This is composed of the Business
    activity code and sub-code used for DEA numbers. Answer must be 2-4 characters in length.

Field - MANUAL ENTRY DATE/TIME (#2):
Description:
    This field should only be populated when a new Business Activity Code
    (BAC) is entered manually due to the failure of the PSO DOJ/DEA WEB
    SERVICE to establish a connection to the DOJ web server.
Help-Prompt:
    This is the date/time this Business Activity Code was manually entered.


FILE: DEA NUMBERS
The DEA NUMBERS FILE is designed to contain demographic and permission
information about a provider related to the ability to order controlled
substance prescriptions.
```

```
Field - ADDITIONAL COMPANY INFO (#1.2):
Description:
    This is the additional company information of the person or institution
    associated with this DEA Number.
Help-Prompt:
    Enter additional company info for the given person/institution. Answer
    must be 1-40 characters in length.

Field - BUSINESS ACTIVITY CODE (#.02):
Description:
    This is the business activity code related to this DEA Number.
Help-Prompt:
    Enter the Business Activity code given to this DEA Number.

Field - CITY (#1.5):
Description:
    This is the city of the permanent address of the person or institution
    related to this DEA Number.
Help-Prompt:
    Enter the city of the permanent address of the person or institution
    associated with this DEA Number. Answer must be 1-33 characters in length.

Field - DEA NUMBER (#.01):
Description:
    This field is used to enter the providers' Drug Enforcement Administration
    (DEA) number. Enter the DEA number as two upper case letters followed
    by 7 digits. e.g., AA1234567.
Help-Prompt:
    Enter the DEA number in the format of 2 letters followed by 7 numbers.

Field - DETOX NUMBER (#.03):
Description:
    If the DEA provider has detox privileges, this field will be populated
    with a 'VX' or 'XA' followed by the numeric portion of the DEA number.
Help-Prompt:
    Enter the detox number associated with this DEA Number. Answer must be 9
    characters in length.

Field - EXPIRATION DATE (#.04):
Description:
    This is the date of expiration for the DEA Number.
Help-Prompt:
    Enter the date this DEA Number expires.

Field - LAST DOJ UPDATE DATE/TIME (#10.3):
Description:
    This is the date/time the DOJ (Department of Justice) data was used to
    update this DEA record.
Help-Prompt:
    Enter the date/time this DEA record was last updated by the DOJ source.

Field - LAST UPDATED BY (#10.1):
Description:
    This is the person from the NEW PERSON file who last initiated an update
    to this DEA record.
Help-Prompt:
    Enter the person who last updated this DEA record.

Field - LAST UPDATED DATE/TIME (#10.2):
Description:
    This is the date/time of the last update to this DEA record.
Help-Prompt:
    Enter the date/time this DEA record was last updated.
```

```
Field - NAME (PROVIDER OR INSTITUTION) (#1.1):
Description:
    This is the name of the facility or person who is associated with this
    DEA Number.
Help-Prompt:
    Enter the name associated with this DEA Number. Answer must be 1-40
    characters in length.

Field - SCHEDULE II NARCOTIC (#2.1):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II drugs.
Help-Prompt:
    DEA number allows for schedule II drugs?

Field - SCHEDULE II NON-NARCOTIC (#2.2):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II non-narcotic.
Help-Prompt:
    Provider has privileges for schedule II non-narcotic?

Field - SCHEDULE III NARCOTIC (#2.3):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III narcotic.
Help-Prompt:
    Provider has privileges for schedule III narcotic?

Field - SCHEDULE III NON-NARCOTIC (#2.4):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III non-narcotic.
Help-Prompt:
    Provider has privileges for schedule III non-narcotic?

Field - SCHEDULE IV (#2.5):
Description:
    This field is used to determine if the provider has privileges for
    Schedule IV controlled substances.
Help-Prompt:
    Provider has privileges for schedule IV?

Field - SCHEDULE V (#2.6):
Description:
    This field is used to determine if the provider has privileges for
    Schedule V controlled substances.
Help-Prompt:
    Provider has privileges for schedule V?

Field - STATE (#1.6):
Description:
    This is the state of the permanent address of the person or institution
    associated with this DEA Number.
Help-Prompt:
    Enter the state of the permanent address associated with the person or
    institution associated with this DEA Number.

Field - STREET ADDRESS 1 (#1.3):
Description:
    This is the first line of the street address of the permanent address of
    the person or institution associated with this DEA Number.
Help-Prompt:
    Enter street address line 1 for the given person/institution. Answer must
    be 1-40 characters in length.
```

```
 Field - STREET ADDRESS 2 (#1.4):
 Description:
     This is the second line of the street address of the permanent address of
     the person or institution associated with this DEA Number.
 Help-Prompt:
     Enter street address line 2 for the given person/institution. Answer must
     be 1-40 characters in length.

 Field - TYPE (#.07):
 Description:
     This identifies whether the DEA number is an individual DEA number or an
     Institutional DEA number.
 Help-Prompt:
     Enter the usage type for the DEA. The DEA usage type may be 'Individual',
     or 'Institutional.

 Field - USE FOR INPATIENT ORDERS? (#.06):
 Description:
     This field indicates if this DEA number can be used for inpatient orders.
 Help-Prompt:
     Can this DEA be used for inpatient orders? Answer 'YES' or 'NO'.

 Field - ZIP CODE (#1.7):
 Description:
     This is the postal ZIP code of the person or institution associated with
     this DEA Number.
 Help-Prompt:
     Enter the ZIP CODE or ZIP+4. Answer must be 5-9 characters in length.

================================================================================

Text in ROUTINES between quotes and/or after ;;, by line number:


XUSER3
  3: Per VA Directive 6402, this routine should not be modified.
 10: Exceeds maximum length (9).
 11: Less than minimum length (9).
 12: Invalid format. Must be 2 upper case letters followed by 7 digits.
 14: Provider DEA number is already associated to another profile. Please check
     the number entered.
 15: DEA number is invalid.  Please check the number entered.
 16: DEA number doesn't match provider's last name. Please verify the
     information.
 21: Type <Enter> to continue
 27: Exceeds maximum length (9).
 28: Less than minimum length (9).
 29: Invalid format. Must be 2 upper case letters followed by 7 digits.
 32: DEA number is invalid.  Please check the number entered.
 50: That Suffix is in use.

**  Analysis Complete  **


Press <Enter> or '^' to exit:
```

REF: For a complete check of all SQA checklist items use the **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] option, see Section 2.4, "KIDS Build Analyzer - Full SQA Search Option."

2.2.3.3 Including SQA Checklist Items, but No Component Descriptions and Routine Text

Figure 9 shows the results when answering **YES** and **NO** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then using the **Print the Report** action to see the report:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **YES**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **NO**

Figure 9: Running the "KIDS Build Analyzer" Option: "Print the Report" Action: Including SQA Checklist Items, but No Component Descriptions and Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu


   1       KIDS Build Analyzer
   2       Delete Build Analyzer Text Files
   3       KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer


This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.


Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL


Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// YES


Do you want to include a section that displays the component descriptions
and text found in routines? NO// NO

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 1 <Enter> . . .


Print Analysis to which Device:   HOME// ;;9999999  TELNET PORT    Right Margin:
 80// <Enter>
```

Figure 10 shows the results from the **Print the Report** action from the **KIDS Build Analyzer** option including SQA checklist items, but no component descriptions and routine text:

Figure 10: Reviewing the "Print the Report" Action Results—Output *with* SQA Checklist Items, but *without* Component Descriptions and Routine Text

```
XU*8.0*688 BUILD OVERVIEW                                  Apr 27, 2023@14:24:02
------------------------------------------------------------------------------
APPLICATION ACTION                     Not Included
BULLETIN                               Not Included
DIALOG                                 Not Included
ENTITY                                 Not Included
FILES                                  Included
FORM                                   Not Included
FUNCTION                               Not Included
HELP FRAME                             Not Included
HL LOGICAL LINK                        Not Included
HL7 APPLICATION PARAMETER              Not Included
HLO APPLICATION REGISTRY               Not Included
INPUT TEMPLATE                         Not Included
LIST TEMPLATE                          Not Included
MAIL GROUP                             Not Included
OPTION                                 Not Included
PARAMETER DEFINITION                   Not Included
PARAMETER TEMPLATE                     Not Included
POLICY                                 Not Included
POLICY FUNCTION                        Not Included
PRINT TEMPLATE                         Not Included
PROTOCOL                               Not Included
REMOTE PROCEDURE                       Not Included
ROUTINE                                Included
SECURITY KEY                           Not Included
SORT TEMPLATE                          Not Included
XULM LOCK DICTIONARY                   Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
------------------------------------------------------------------------------

ROUTINES
```

```
Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>


============================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

============================================================================

ALL ^XTMP calls have zero nodes defined in this build's routines

XUSER3

 ^( ..........................................................................
   VALN1DEA +8  I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
              EN^DDIOL($C(7)_"Provider DEA number is already associated to
              another profile. Please check the number entered.") K X

**  Analysis Complete  **
```

REF: For a complete check of all SQA checklist items use the **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] option, see Section 2.4, "KIDS Build Analyzer - Full SQA Search Option."

2.2.3.4 Including Component Descriptions and Routine Text, but No SQA Checklist Items

Figure 11 shows the results when answering **NO** and **YES** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then using the **Print the Report** action to see the report:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **NO**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **YES**

Figure 11: Running the "KIDS Build Analyzer" Option: "Print the Report" Action: Including Component Descriptions and Routine Text, but No SQA Checklist Items—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu


   1       KIDS Build Analyzer
   2       Delete Build Analyzer Text Files
   3       KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.


Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL


Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// NO


Do you want to include a section that displays the component descriptions
and text found in routines? NO// YES

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 1 <Enter>  . . .


Print Analysis to which Device:   HOME// ;;9999999  TELNET PORT    Right Margin:
 80// <Enter>
```

Figure 12 shows the results from the **Print the Report** action from the **KIDS Build Analyzer** option including component descriptions and routine text, but no SQA checklist items:

Figure 12: Reviewing the "Print the Report" Action Results—Output *with* Component Descriptions and Routine Text, but *without* SQA Checklist Items

```
XU*8.0*688 BUILD OVERVIEW                                  Apr 27, 2023@14:46:44
------------------------------------------------------------------------------
APPLICATION ACTION                     Not Included
BULLETIN                               Not Included
DIALOG                                 Not Included
ENTITY                                 Not Included
FILES                                  Included
FORM                                   Not Included
FUNCTION                               Not Included
HELP FRAME                             Not Included
HL LOGICAL LINK                        Not Included
HL7 APPLICATION PARAMETER              Not Included
HLO APPLICATION REGISTRY               Not Included
INPUT TEMPLATE                         Not Included
LIST TEMPLATE                          Not Included
MAIL GROUP                             Not Included
OPTION                                 Not Included
PARAMETER DEFINITION                   Not Included
PARAMETER TEMPLATE                     Not Included
POLICY                                 Not Included
POLICY FUNCTION                        Not Included
PRINT TEMPLATE                         Not Included
PROTOCOL                               Not Included
REMOTE PROCEDURE                       Not Included
ROUTINE                                Included
SECURITY KEY                           Not Included
SORT TEMPLATE                          Not Included
XULM LOCK DICTIONARY                   Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
------------------------------------------------------------------------------

ROUTINES
```

```
Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================


Descriptions and other text associated with this build (for review and
spell check):


BUILD: XU*8.0*688
See FORUM Patch description.


FILE: NEW PERSON

SUBFILE 200.5321; FIELD: .01: DEA NUMBER
This field is used to enter the provider's Drug Enforcement Administration
(DEA) number(s). Enter the DEA number as two upper case letters followed
by 7 digits. e.g., AA1234567.
HELP-PROMPT:
Enter DEA number in the format 2 upper case letters followed by 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number

FIELD: 53.2: DEA#
This field is used to enter the Drug Enforcement Agency (DEA) number.
Enter the DEA number as two upper case letters followed by 7 digits.
e.g., AA1234567.
HELP-PROMPT:
Enter the DEA number 2 letters 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number
HELP-PROMPT: missing.


FILE: DEA BUSINESS ACTIVITY CODES
The DEA BUSINESS ACTIVITY CODES FILE is associated with the DEA numbers
and provider information in the DEA NUMBERS file.  This file links a
```

```
provider with the type of service provided.  It contains BUSINESS
ACTIVITY CODES that are supplied by the DOJ/DEA web service.


 Field - BUSINESS ACTIVITY (#.02):
 Description:
     This field holds the Business Activity value used for DEA numbers. This
     value can currently be one of the following:
     A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,S,T or U

     This value, combined with a numeric business sub-type, categorizes a DEA
     number.
 Help-Prompt:
     Enter the Business Activity value for used for DEA numbers. Answer must
     be 1-3 characters in length.

 Field - BUSINESS ACTIVITY DESCRIPTION (#1):
 Description:
     This is the description given for the Business Activity Code and Sub-code.
 Help-Prompt:
     Enter the Business Activity description given for the Business Activity
     code and Business Activity Sub-code. Answer must be 3-60 characters in length.

 Field - BUSINESS ACTIVITY SUB-CODE (#.03):
 Description:
     DEA uses an alpha character business activity code to identify various
     categories of registrants. For example business activity code "C"
     indicates a "Practitioner". DEA added a business activity sub-code field
     to identify new sub-categories of registrants.
     For example business activity code "C" in combination with business
     activity sub-code "1" indicates a practitioner who has received a Drug
     Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
     office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
     DW/275). As new sub-categories of business activities become regulated,
     additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
     assigned. MLP = Mid-Level Practitioner. NG = National Guard
 Help-Prompt:
     Enter the business activity sub-code associated with the Business
     Activity Code. Answer must be 1-3 characters in length.

 Field - FULL BUSINESS ACTIVITY CODE (#.01):
 Description:
     DEA uses an alpha character business activity code to identify various
     categories of registrants. For example business activity code "C"
     indicates a "Practitioner". DEA added a business activity sub-code field
     to identify new sub-categories of registrants.
     For example business activity code "C" in combination with business
     activity sub-code "1" indicates a practitioner who has received a Drug
     Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
     office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
     DW/275). As new sub-categories of business activities become regulated,
     additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
     assigned. MLP = Mid-Level Practitioner. NG = National Guard.
 Help-Prompt:
     Enter the full business activity code. This is composed of the Business
     activity code and sub-code used for DEA numbers. Answer must be 2-4 characters
     in length.

 Field - MANUAL ENTRY DATE/TIME (#2):
```

```
 Description:
     This field should only be populated when a new Business Activity Code
     (BAC) is entered manually due to the failure of the PSO DOJ/DEA WEB
     SERVICE to establish a connection to the DOJ web server.
 Help-Prompt:
     This is the date/time this Business Activity Code was manually entered.


FILE: DEA NUMBERS
The DEA NUMBERS FILE is designed to contain demographic and permission
information about a provider related to the ability to order controlled
substance prescriptions.


 Field - ADDITIONAL COMPANY INFO (#1.2):
 Description:
     This is the additional company information of the person or institution
     associated with this DEA Number.
 Help-Prompt:
     Enter additional company info for the given person/institution. Answer
     must be 1-40 characters in length.

 Field - BUSINESS ACTIVITY CODE (#.02):
 Description:
     This is the business activity code related to this DEA Number.
 Help-Prompt:
     Enter the Business Activity code given to this DEA Number.

 Field - CITY (#1.5):
 Description:
     This is the city of the permanent address of the person or institution
     related to this DEA Number.
 Help-Prompt:
     Enter the city of the permanent address of the person or institution
     associated with this DEA Number. Answer must be 1-33 characters in length.

 Field - DEA NUMBER (#.01):
 Description:
     This field is used to enter the providers' Drug Enforcement Administration
     (DEA) number. Enter the DEA number as two upper case letters followed
     by 7 digits. e.g., AA1234567.
 Help-Prompt:
     Enter the DEA number in the format of 2 letters followed by 7 numbers.

 Field - DETOX NUMBER (#.03):
 Description:
     If the DEA provider has detox privileges, this field will be populated
     with a 'VX' or 'XA' followed by the numeric portion of the DEA number.
 Help-Prompt:
     Enter the detox number associated with this DEA Number. Answer must be 9
     characters in length.

 Field - EXPIRATION DATE (#.04):
 Description:
     This is the date of expiration for the DEA Number.
 Help-Prompt:
     Enter the date this DEA Number expires.

 Field - LAST DOJ UPDATE DATE/TIME (#10.3):
```

```
Description:
    This is the date/time the DOJ (Department of Justice) data was used to
    update this DEA record.
Help-Prompt:
    Enter the date/time this DEA record was last updated by the DOJ source.

Field - LAST UPDATED BY (#10.1):
Description:
    This is the person from the NEW PERSON file who last initiated an update
    to this DEA record.
Help-Prompt:
    Enter the person who last updated this DEA record.

Field - LAST UPDATED DATE/TIME (#10.2):
Description:
    This is the date/time of the last update to this DEA record.
Help-Prompt:
    Enter the date/time this DEA record was last updated.

Field - NAME (PROVIDER OR INSTITUTION) (#1.1):
Description:
    This is the name of the facility or person who is associated with this
    DEA Number.
Help-Prompt:
    Enter the name associated with this DEA Number. Answer must be 1-40
    characters in length.

Field - SCHEDULE II NARCOTIC (#2.1):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II drugs.
Help-Prompt:
    DEA number allows for schedule II drugs?

Field - SCHEDULE II NON-NARCOTIC (#2.2):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II non-narcotic.
Help-Prompt:
    Provider has privileges for schedule II non-narcotic?

Field - SCHEDULE III NARCOTIC (#2.3):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III narcotic.
Help-Prompt:
    Provider has privileges for schedule III narcotic?

Field - SCHEDULE III NON-NARCOTIC (#2.4):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III non-narcotic.
Help-Prompt:
    Provider has privileges for schedule III non-narcotic?

Field - SCHEDULE IV (#2.5):
Description:
    This field is used to determine if the provider has privileges for
    Schedule IV controlled substances.
```

```
Help-Prompt:
    Provider has privileges for schedule IV?

Field - SCHEDULE V (#2.6):
Description:
    This field is used to determine if the provider has privileges for
    Schedule V controlled substances.
Help-Prompt:
    Provider has privileges for schedule V?

Field - STATE (#1.6):
Description:
    This is the state of the permanent address of the person or institution
    associated with this DEA Number.
Help-Prompt:
    Enter the state of the permanent address associated with the person or
    institution associated with this DEA Number.

Field - STREET ADDRESS 1 (#1.3):
Description:
    This is the first line of the street address of the permanent address of
    the person or institution associated with this DEA Number.
Help-Prompt:
    Enter street address line 1 for the given person/institution. Answer must
    be 1-40 characters in length.

Field - STREET ADDRESS 2 (#1.4):
Description:
    This is the second line of the street address of the permanent address of
    the person or institution associated with this DEA Number.
Help-Prompt:
    Enter street address line 2 for the given person/institution. Answer must
    be 1-40 characters in length.

Field - TYPE (#.07):
Description:
    This identifies whether the DEA number is an individual DEA number or an
    Institutional DEA number.
Help-Prompt:
    Enter the usage type for the DEA. The DEA usage type may be 'Individual',
    or 'Institutional.

Field - USE FOR INPATIENT ORDERS? (#.06):
Description:
    This field indicates if this DEA number can be used for inpatient orders.
Help-Prompt:
    Can this DEA be used for inpatient orders? Answer 'YES' or 'NO'.

Field - ZIP CODE (#1.7):
Description:
    This is the postal ZIP code of the person or institution associated with
    this DEA Number.
Help-Prompt:
    Enter the ZIP CODE or ZIP+4. Answer must be 5-9 characters in length.

==========================================================================

Text in ROUTINES between quotes and/or after ;;, by line number:
```

```
XUSER3
  3: Per VA Directive 6402, this routine should not be modified.
 10: Exceeds maximum length (9).
 11: Less than minimum length (9).
 12: Invalid format. Must be 2 upper case letters followed by 7 digits.
 14: Provider DEA number is already associated to another profile. Please check
     the number entered.
 15: DEA number is invalid.  Please check the number entered.
 16: DEA number doesn't match provider's last name. Please verify the
     information.
 21: Type <Enter> to continue
 27: Exceeds maximum length (9).
 28: Less than minimum length (9).
 29: Invalid format. Must be 2 upper case letters followed by 7 digits.
 32: DEA number is invalid.  Please check the number entered.
 50: That Suffix is in use.

**  Analysis Complete  **


Press <Enter> or '^' to exit:
```

2.2.4 Create the Report in .TXT Files Action

If you chooses the **Create the Report in .TXT Files** action in Figure 2, the report content is sent to text (**.txt**) files.

2.2.4.1 Text File Directory Path

You are asked to either accept the default directory path to place the text files, or to choose a different directory path (Figure 13):

- To accept the default path, press **<Enter>** at the "Replace" prompt.
- To replace or modify the path, do the following at the "Replace" prompt:
  1. Type the part of the path to replace or type **three** (**3**) dots to replace the whole path.
  2. Press **<Enter>**.
  3. Type the replaced path changes.

Figure 13: Sending Data to Text Files—Sample Dialog to Accept or Modify the .TXT Path Directory

```
Set the path to place the .TXT files
or accept the standard default.

PATH: /srv/vista/ddv/user/hfs/  Replace
```

REF: Use Secure Shell (SSH) File Transfer Protocol (SFTP) to move text documents to your PC.

2.2.4.2 Text File Naming Formats

2.2.4.2.1 Build Analysis

The following is the Build Analysis text file name format:

***<Directory Path>*/XPBA_Anal_*<Build Name: Namespace-Version-Patch ID>*_*<Date Build Analysis Run: MM-DD-YY>*.TXT**

For example:

/srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_04-27-23.TXT

Where:

- Directory Path: **/srv/vista/ddv/user/hfs/**
- Build Name: **XU-8.0-688**
- Date: **04-27-23**

2.2.4.2.2 SQA Checklist Review

The following is the SQA Checklist Review text file name format:

***<Directory Path>*/XPBA_SQA_*<Build Name: Namespace-Version-Patch ID>*_*<Date Build Analysis Run: MM-DD-YY>*.TXT**

For example:

/srv/vista/oak/user/hfs/XPBA_SQA_XU-8.0-688_04-27-23.TXT

Where:

- Directory Path: **/srv/vista/ddv/user/hfs/**
- Build Name: **XU-8.0-688**
- Date: **04-27-23**

2.2.4.2.3 Description/Routine Text Review

The following is the Description/Routine Text Review text file name format:

***<Directory Path>*/XPBA_Spell_*<Build Name: Namespace-Version-Patch ID>*_*<Date Build Analysis Run: MM-DD-YY>*.TXT**

For example:

/srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT

Where:

- Directory Path: **/srv/vista/ddv/user/hfs/**
- Build Name: **XU-8.0-688**
- Date: **04-27-23**

2.2.4.3 No SQA Checklist Items, Component Descriptions, or Routine Text

Figure 14 shows the results when answering **NO** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then selecting the **Create the Report in .TXT Files** action:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **NO**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **NO**

In this example (Figure 14) and with these prompt settings, the **Create the Report in .TXT Files** action produces only **one** text file:

XPBA_Anal_XU-8.0-688_01-26-23.TXT

Figure 14: Running the "KIDS Build Analyzer" Option: "Create the Report in .TXT Files" Action: No SQA Checklist Items, Component Descriptions, or Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1       KIDS Build Analyzer
   2       Delete Build Analyzer Text Files
   3       KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.

Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL

Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// NO

Do you want to include a section that displays the component descriptions
and text found in routines? NO// NO

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages
```

```
Select number:  (1-3): 2 <Enter>  . . .
Set the path to place the .TXT files
or accept the standard default.

PATH: /srv/vista/oak/user/hfs/  Replace <Enter>

Build Analysis file was created.
File:
          /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_01-26-23.TXT

Press <Enter> or '^' to exit:
```

2.2.4.3.1 XPBA_Anal_XU-8.0-688_01-26-23.TXT File

Figure 15 shows the **XPBA_Anal_XU-8.0-688_01-26-23.TXT** file contents from the **Create the Report in .TXT Files** action from the **KIDS Build Analyzer** option *without* including SQA checklist items, component descriptions, and routine text:

Figure 15: Reviewing the Create the Report in .TXT Files Action—Output *without* SQA Checklist Items, Component Descriptions, or Routine Text: XPBA_Anal_XU-8.0-688_01-26-23.TXT File

```
   KIDS    Kernel Installation & Distribution System ...
   NTEG    Build an 'NTEG' routine for a package
   PG      Programmer mode
           Calculate and Show Checksum Values
           Delete Unreferenced Options
           Error Processing ...
           Global Block Count
           List Global
           Map Pointer Relations
           Number base changer
           Routine Tools ...
           Test an option not in your menu
           Verifier Tools Menu ...

Select Programmer Options <TEST ACCOUNT> Option: PG <Enter> Programmer mode

KRNTST1>!pr /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_01-26-23.TXT


2023-01-26 07:39 /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_01-26-23.TXT Page1


XU*8.0*688 BUILD OVERVIEW                                  Jan 26, 2023@07:38:52
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
```

```
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"


2023-01-26 07:39 /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_01-26-23.TXT Page2


It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date of Last ^XINDEX: JAN 24, 2023

                           <><><>


==============================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

==============================================================================

KRNDEV>
```

2.2.4.4 Including SQA Checklist Items, Component Descriptions, and Routine Text

Figure 16 shows the results when answering **YES** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then selecting the **Create the Report in .TXT Files** action:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **YES**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **YES**

In this example (Figure 16) and with these prompt settings, the **Create the Report in .TXT Files** action produces **three** text files:

- **XPBA_Anal_XU-8.0-688_04-27-23.TXT** (Figure 17)
- **XPBA_SQA_XU-8.0-688_04-27-23.TXT** (Figure 18)
- **XPBA_Spell_XU-8.0-688_04-27-23.TXT** (Figure 19)

Figure 16: Running the "KIDS Build Analyzer" Option: "Create the Report in .TXT Files" Action: Including SQA Checklist Items, Component Descriptions, and Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.

Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL

Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// YES

Do you want to include a section that displays the component descriptions
and text found in routines? NO// YES

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 2 <Enter>  . . .
Set the path to place the .TXT files
or accept the standard default.

PATH: /srv/vista/oak/user/hfs/  Replace <Enter>
```

```
Build Analysis file was created.
File:
          /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_04-27-23.TXT

SQA Checklist review file was created.
File:
     /srv/vista/oak/user/hfs/XPBA_SQA_XU-8.0-688_04-27-23.TXT

Description/Routine text review file was created.
File:
     /srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT

**  Analysis Complete  **


Press <Enter> or '^' to exit:
```

2.2.4.4.1 XPBA_Anal_XU-8.0-688_04-27-23.TXT File

Figure 17 shows the **XPBA_Anal_XU-8.0-688_04-27-23.TXT** file contents from the **Create the Report in .TXT Files** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

Figure 17: Reviewing the "Create the Report in .TXT Files" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: XPBA_Anal_XU-8.0-688_04-27-23.TXT File

```
   KIDS   Kernel Installation & Distribution System ...
   NTEG   Build an 'NTEG' routine for a package
   PG     Programmer mode
          Calculate and Show Checksum Values
          Delete Unreferenced Options
          Error Processing ...
          Global Block Count
          List Global
          Map Pointer Relations
          Number base changer
          Routine Tools ...
          Test an option not in your menu
          Verifier Tools Menu ...

Select Programmer Options <TEST ACCOUNT> Option: PG <Enter> Programmer mode

KRNTST1>!pr /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_04-27-23.TXT


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_04-27-23.TXT Page1


XU*8.0*688 BUILD OVERVIEW                                  Apr 27, 2023@14:51:23
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
```

```
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
-------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
-------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
-------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_Anal_XU-8.0-688_04-27-23.TXT Page2


It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                           <><><>


===============================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

===============================================================================


KRNTST1>
```

2.2.4.4.2 XPBA_SQA_XU-8.0-688_04-27-23.TXT File

Figure 18 shows the **XPBA_SQA_XU-8.0-688_04-27-23.TXT** file contents from the **Create the Report in .TXT Files** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

Figure 18: Reviewing the "Create the Report in .TXT Files" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: XPBA_SQA_XU-8.0-688_04-27-23.TXT File

```
KRNTST1>!pr /srv/vista/oak/user/hfs/XPBA_SQA_XU-8.0-688_04-27-23.TXT


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_SQA_XU-8.0-688_04-27-23.TXT Page 1


ALL ^XTMP calls have zero nodes defined in this build's routines

XUSER3

 ^( ..........................................................................
   VALN1DEA +8  I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
               EN^DDIOL($C(7)_"Provider DEA number is already associated to
               another profile. Please check the number entered.") K X


KRNTST1>
```

2.2.4.4.3 XPBA_Spell_XU-8.0-688_04-27-23.TXT File

Figure 19 shows the **XPBA_Spell_XU-8.0-688_04-27-23.TXT** file contents from the **Create the Report in .TXT Files** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

Figure 19: Reviewing the "Create the Report in .TXT Files" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: XPBA_Spell_XU-8.0-688_04-27-23.TXT File

```
KRNTST1>!pr /srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT Pag1


Text for Review/Spell Check, Build XU*8.0*688; 4/27/23

Descriptions and other text associated with this build (for review and
spell check):


BUILD: XU*8.0*688
See FORUM Patch description.


FILE: NEW PERSON

SUBFILE 200.5321; FIELD: .01: DEA NUMBER
This field is used to enter the provider's Drug Enforcement Administration
(DEA) number(s). Enter the DEA number as two upper case letters followed
by 7 digits. e.g., AA1234567.
HELP-PROMPT:
Enter DEA number in the format 2 upper case letters followed by 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number

FIELD: 53.2: DEA#
This field is used to enter the Drug Enforcement Agency (DEA) number.
Enter the DEA number as two upper case letters followed by 7 digits.
e.g., AA1234567.
HELP-PROMPT:
Enter the DEA number 2 letters 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number
HELP-PROMPT: missing.


FILE: DEA BUSINESS ACTIVITY CODES
The DEA BUSINESS ACTIVITY CODES FILE is associated with the DEA numbers
and provider information in the DEA NUMBERS file.  This file links a
provider with the type of service provided.  It contains BUSINESS
ACTIVITY CODES that are supplied by the DOJ/DEA web service.


 Field - BUSINESS ACTIVITY (#.02):
 Description:
     This field holds the Business Activity value used for DEA numbers. This
```

```
     value can currently be one of the following:
     A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,S,T or U

     This value, combined with a numeric business sub-type, categorizes a DEA
     number.
 Help-Prompt:
     Enter the Business Activity value for used for DEA numbers. Answer must
     be 1-3 characters in length.

 Field - BUSINESS ACTIVITY DESCRIPTION (#1):
 Description:
     This is the description given for the Business Activity Code and Sub-code.
 Help-Prompt:


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     Enter the Business Activity description given for the Business Activity
     code and Business Activity Sub-code. Answer must be 3-60 characters in len.

 Field - BUSINESS ACTIVITY SUB-CODE (#.03):
 Description:
     DEA uses an alpha character business activity code to identify various
     categories of registrants. For example business activity code "C"
     indicates a "Practitioner". DEA added a business activity sub-code field
     to identify new sub-categories of registrants.
     For example business activity code "C" in combination with business
     activity sub-code "1" indicates a practitioner who has received a Drug
     Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
     office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
     DW/275). As new sub-categories of business activities become regulated,
     additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
     assigned. MLP = Mid-Level Practitioner. NG = National Guard
 Help-Prompt:
     Enter the business activity sub-code associated with the Business
     Activity Code. Answer must be 1-3 characters in length.

 Field - FULL BUSINESS ACTIVITY CODE (#.01):
 Description:
     DEA uses an alpha character business activity code to identify various
     categories of registrants. For example business activity code "C"
     indicates a "Practitioner". DEA added a business activity sub-code field
     to identify new sub-categories of registrants.
     For example business activity code "C" in combination with business
     activity sub-code "1" indicates a practitioner who has received a Drug
     Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
     office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
     DW/275). As new sub-categories of business activities become regulated,
     additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
     assigned. MLP = Mid-Level Practitioner. NG = National Guard.
 Help-Prompt:
     Enter the full business activity code. This is composed of the Business
     activity code and sub-code used for DEA numbers. Answer must be 2-4 charac.

 Field - MANUAL ENTRY DATE/TIME (#2):
 Description:
     This field should only be populated when a new Business Activity Code
     (BAC) is entered manually due to the failure of the PSO DOJ/DEA WEB
```

```
     SERVICE to establish a connection to the DOJ web server.
 Help-Prompt:
     This is the date/time this Business Activity Code was manually entered.


FILE: DEA NUMBERS
The DEA NUMBERS FILE is designed to contain demographic and permission
information about a provider related to the ability to order controlled
substance prescriptions.


 Field - ADDITIONAL COMPANY INFO (#1.2):
 Description:
     This is the additional company information of the person or institution
     associated with this DEA Number.


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT Pag3


 Help-Prompt:
     Enter additional company info for the given person/institution. Answer
     must be 1-40 characters in length.

 Field - BUSINESS ACTIVITY CODE (#.02):
 Description:
     This is the business activity code related to this DEA Number.
 Help-Prompt:
     Enter the Business Activity code given to this DEA Number.

 Field - CITY (#1.5):
 Description:
     This is the city of the permanent address of the person or institution
     related to this DEA Number.
 Help-Prompt:
     Enter the city of the permanent address of the person or institution
     associated with this DEA Number. Answer must be 1-33 characters in length.

 Field - DEA NUMBER (#.01):
 Description:
     This field is used to enter the providers' Drug Enforcement Administration
     (DEA) number. Enter the DEA number as two upper case letters followed
     by 7 digits. e.g., AA1234567.
 Help-Prompt:
     Enter the DEA number in the format of 2 letters followed by 7 numbers.

 Field - DETOX NUMBER (#.03):
 Description:
     If the DEA provider has detox privileges, this field will be populated
     with a 'VX' or 'XA' followed by the numeric portion of the DEA number.
 Help-Prompt:
     Enter the detox number associated with this DEA Number. Answer must be 9
     characters in length.

 Field - EXPIRATION DATE (#.04):
 Description:
     This is the date of expiration for the DEA Number.
 Help-Prompt:
     Enter the date this DEA Number expires.
```

```
 Field - LAST DOJ UPDATE DATE/TIME (#10.3):
 Description:
     This is the date/time the DOJ (Department of Justice) data was used to
     update this DEA record.
 Help-Prompt:
     Enter the date/time this DEA record was last updated by the DOJ source.

 Field - LAST UPDATED BY (#10.1):
 Description:
     This is the person from the NEW PERSON file who last initiated an update
     to this DEA record.
 Help-Prompt:
     Enter the person who last updated this DEA record.

 Field - LAST UPDATED DATE/TIME (#10.2):
 Description:


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     This is the date/time of the last update to this DEA record.
 Help-Prompt:
     Enter the date/time this DEA record was last updated.

 Field - NAME (PROVIDER OR INSTITUTION) (#1.1):
 Description:
     This is the name of the facility or person who is associated with this
     DEA Number.
 Help-Prompt:
     Enter the name associated with this DEA Number. Answer must be 1-40
     characters in length.

 Field - SCHEDULE II NARCOTIC (#2.1):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule II drugs.
 Help-Prompt:
     DEA number allows for schedule II drugs?

 Field - SCHEDULE II NON-NARCOTIC (#2.2):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule II non-narcotic.
 Help-Prompt:
     Provider has privileges for schedule II non-narcotic?

 Field - SCHEDULE III NARCOTIC (#2.3):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule III narcotic.
 Help-Prompt:
     Provider has privileges for schedule III narcotic?

 Field - SCHEDULE III NON-NARCOTIC (#2.4):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule III non-narcotic.
```

```
 Help-Prompt:
     Provider has privileges for schedule III non-narcotic?

 Field - SCHEDULE IV (#2.5):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule IV controlled substances.
 Help-Prompt:
     Provider has privileges for schedule IV?

 Field - SCHEDULE V (#2.6):
 Description:
     This field is used to determine if the provider has privileges for
     Schedule V controlled substances.
 Help-Prompt:
     Provider has privileges for schedule V?

 Field - STATE (#1.6):
 Description:
```



```
     This is the state of the permanent address of the person or institution
     associated with this DEA Number.
 Help-Prompt:
     Enter the state of the permanent address associated with the person or
     institution associated with this DEA Number.

 Field - STREET ADDRESS 1 (#1.3):
 Description:
     This is the first line of the street address of the permanent address of
     the person or institution associated with this DEA Number.
 Help-Prompt:
     Enter street address line 1 for the given person/institution. Answer must
     be 1-40 characters in length.

 Field - STREET ADDRESS 2 (#1.4):
 Description:
     This is the second line of the street address of the permanent address of
     the person or institution associated with this DEA Number.
 Help-Prompt:
     Enter street address line 2 for the given person/institution. Answer must
     be 1-40 characters in length.

 Field - TYPE (#.07):
 Description:
     This identifies whether the DEA number is an individual DEA number or an
     Institutional DEA number.
 Help-Prompt:
     Enter the usage type for the DEA. The DEA usage type may be 'Individual',
     or 'Institutional.

 Field - USE FOR INPATIENT ORDERS? (#.06):
 Description:
     This field indicates if this DEA number can be used for inpatient orders.
 Help-Prompt:
     Can this DEA be used for inpatient orders? Answer 'YES' or 'NO'.
```

```
 Field - ZIP CODE (#1.7):
 Description:
     This is the postal ZIP code of the person or institution associated with
     this DEA Number.
 Help-Prompt:
     Enter the ZIP CODE or ZIP+4. Answer must be 5-9 characters in length.

================================================================================

Text in ROUTINES between quotes and/or after ;;, by line number:


XUSER3
  3: Per VA Directive 6402, this routine should not be modified.
 10: Exceeds maximum length (9).
 11: Less than minimum length (9).
 12: Invalid format. Must be 2 upper case letters followed by 7 digits.
 14: Provider DEA number is already associated to another profile. Please check
     the number entered.
 15: DEA number is invalid.  Please check the number entered.


2023-04-27 14:51 /srv/vista/oak/user/hfs/XPBA_Spell_XU-8.0-688_04-27-23.TXT Pag6


 16: DEA number doesn't match provider's last name. Please verify the
     information.
 21: Type <Enter> to continue
 27: Exceeds maximum length (9).
 28: Less than minimum length (9).
 29: Invalid format. Must be 2 upper case letters followed by 7 digits.
 32: DEA number is invalid.  Please check the number entered.
 50: That Suffix is in use.


KRNTST1>
```

2.2.5 Send the Report in MailMan Messages Action

If choosing to email the build analysis data, you get a choice of to whom or to what mail groups the emails should be sent. If you optionally include SQA checklist items, component descriptions, and routine text you will get 1-3 messages, depending on the choices made in Figure 2, and will be prompted for each one on where to send it.

2.2.5.1 No SQA Checklist Items, Component Descriptions, or Routine Text

Figure 20 shows the results when answering **NO** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then selecting the **Send the Report in MailMan Messages** action:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **NO**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **NO**

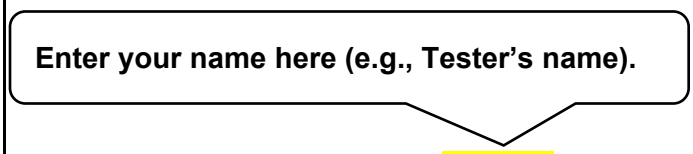
In this example (Figure 20) and with these prompt settings, the **Send the Report in MailMan Messages** action produces only **one** email message:

Build Analysis - XU*8.0*688

Figure 20: Running the KIDS Build Analyzer Option: "Send the Report in MailMan Messages" Action: No SQA Checklist Items, Component Descriptions, or Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.

Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL

Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// NO

Do you want to include a section that displays the component descriptions
and text found in routines? NO// NO

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 3 <Enter>
```

```
BUILD ANALYSIS email:

Send mail to: XUUSER,ONE// <Enter> XUUSER,ONE
Select basket to send to: IN// <Enter>
And Send to: <Enter>

**  Analysis Complete  **

Check for email with subject of Build Analysis - XU*8.0*688
```



2.2.5.1.1 Build Analysis - XU*8.0*688 Message

Figure 21 and Figure 22 show the **Build Analysis - XU*8.0*688** message contents from the **Send the Report in MailMan Messages** action from the **KIDS Build Analyzer** option *without* including SQA checklist items, component descriptions, and routine text:

Figure 21: Retrieving the Email Sent with the "Send the Report in MailMan Messages" Action from the KIDS Build Analyzer Option—System Prompts and User Entries

```
Select Systems Manager Menu <TEST ACCOUNT> Option: XMUSER <Enter> MailMan Menu

VA MailMan 8.0 service for XUUSER.ONE@<REDACTED>.VA.GOV
You last used MailMan: 01/30/23@06:58
You have 1 new message.

   NML     New Messages and Responses
   RML     Read/Manage Messages
   SML     Send a Message
           Query/Search for Messages
   AML     Become a Surrogate (SHARED,MAIL or Other)
           Personal Preferences ...
           Other MailMan Functions ...
           Help (User/Group Info., etc.) ...

Select MailMan Menu <TEST ACCOUNT> Option: RML <Enter> Read/Manage Messages

Select message reader: Classic// <Enter>
Read mail in basket: IN// <Enter> (10 messages, 1 new)
Last message number: 10   Messages in basket: 10 (1 new)
Enter ??? for help.

IN Basket Message: 1// ?


IN Basket, 10 messages (1-10), 1 new
*=New/!=Priority.......Subject.........................From.....................
   1. ZZDAVE*1.0*1 v1                                  <XUUSER.ONE@KRNDEV.
   2. Backup of ZZDAVE*1.0*1 on Feb 13, 2023           XUUSER.ONE
   3. XU*8*782 TEST v1                                 <"NPM   [#114763033]"@FO
   4. Backup of XU*8.0*782 on Feb 17, 2023             STERNGAST,DAVIDXUUSER.ONE
   5. XU*8*782 TEST v2                                 <"NPM   [#114856013]"@FO
   6. ZZTEST785*1.0*1 v1                               XUUSER.ONE
   7. XU*8*785 TEST v1                                 <"NPM   [#115262788]"@FO
   8. Backup of XU*8.0*785 on Apr 10, 2023             XUUSER.ONE
   9. XU*8*782 TEST v4                                 <"NPM   [#115347325]"@FO
 *10. Build Analysis - XU*8.0*688                      KERNEL BUILD ANALYZER
```

The email message indicates that this is the "Build Analysis" for the build you selected.

```
IN Basket Message: 1// 10
```

Figure 22: Reviewing the Email Sent with the "Send the Report in MailMan Messages" Action from the KIDS Build Analyzer Option—Sample Build Analysis Email

```
Subj: Build Analysis - XU*8.0*688  [#176546] 04/13/23@05:59  76 lines
From: KERNEL BUILD ANALYZER  In 'IN' basket.   Page 1  *New*
-------------------------------------------------------------------------------

XU*8.0*688 BUILD OVERVIEW                                  Apr 13, 2023@05:59:21
-------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included

Type <Enter> to continue or '^' to exit: <Enter>

Subj: Build Analysis - XU*8.0*688  [#172100]   Page 2
-------------------------------------------------------------------------------
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
-------------------------------------------------------------------------------

*** Detailed results for components included in build XU*8.0*688  ***
-------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)

Type <Enter> to continue or '^' to exit: <Enter>

Subj: Build Analysis - XU*8.0*688  [#172100]   Page 3
-------------------------------------------------------------------------------
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
-------------------------------------------------------------------------------
```

```
ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

Type <Enter> to continue or '^' to exit: <Enter>

Subj: Build Analysis - XU*8.0*688  [#172100]   Page 4
------------------------------------------------------------------------------
 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date of Last ^XINDEX: JAN 24, 2023

                           <><><>

==============================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

==============================================================================

Enter message action (in IN basket): Ignore// <Enter>

End reached.  Begin again? No//
```

2.2.5.2 Including SQA Checklist Items, Component Descriptions, and Routine Text

Figure 23 shows the results when answering **YES** to the following prompts in the **KIDS Build Analyzer** [XPDANLYZ] option and then selecting the **Send the Report in MailMan Messages** action:

- "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" **YES**
- "Do you want to include a section that displays the component descriptions and text found in routines? NO//" **YES**

In this example (Figure 23) and with these prompt settings, the **Send the Report in MailMan Messages** action produces **three** email message:

- **Build Analysis - XU*8.0*688** (Figure 24)
- **SQA Analysis - XU*8.0*688** (Figure 25)
- **Routine and Component Text - XU*8.0*688** (Figure 26)

Figure 23: Running the KIDS Build Analyzer Option: "Send the Report in MailMan Messages" Action: Including SQA Checklist Items, Component Descriptions, or Routine Text—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 1 <Enter> KIDS Build Analyzer

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.

Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL

Do you want to include a section that displays the routine lines containing specific
code references reviewed on the SQA checklist? NO// YES

Do you want to include a section that displays the component descriptions
and text found in routines? NO// YES

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 3 <Enter>

BUILD ANALYSIS email:
Send mail to: XUUSER,TWO// <Enter> XUUSER,TWO
Select basket to send to: IN// <Enter>
And Send to: <Enter>
```

```
Check for email with subject of Build Analysis - XU*8.0*688


SQA Checklist review email:
Send mail to: XUUSER,TWO// <Enter> XUUSER,TWO
Select basket to send to: IN// <Enter>
And Send to: <Enter>
Check for email with subject of:
          SQA Analysis - XU*8.0*688


Routine/Component Text email:
Send mail to: XUUSER,TWO// <Enter> XUUSER,TWO
Select basket to send to: IN// <Enter>
And Send to: <Enter>
Check for email with subject of:
          Routine and Component Text - XU*8.0*688


**  Analysis Complete  **


   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option:
```

2.2.5.2.1 Build Analysis - XU*8.0*688 Message

Figure 24 shows the **Build Analysis - XU*8.0*688** message contents from the **Send the Report in MailMan Messages** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

NOTE: To retrieve the email sent with the "Send the Report in MailMan Messages" Action from the KIDS Build Analyzer Option, follow the prompts indicated in Figure 21.

Figure 24: Reviewing the Email Sent with the "Send the Report in MailMan Messages" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: Build Analysis - XU*8.0*688 Message

```
Subj: Build Analysis - XU*8.0*688  [#176989] 04/27/23@18:33  76 lines
From: KERNEL BUILD ANALYZER  In 'IN' basket.   Page 1  *New*
------------------------------------------------------------------------------

XU*8.0*688 BUILD OVERVIEW                                  Apr 27, 2023@18:32:51
------------------------------------------------------------------------------
APPLICATION ACTION                    Not Included
BULLETIN                              Not Included
DIALOG                                Not Included
ENTITY                                Not Included
FILES                                 Included
FORM                                  Not Included
FUNCTION                              Not Included
HELP FRAME                            Not Included
HL LOGICAL LINK                       Not Included
HL7 APPLICATION PARAMETER             Not Included
HLO APPLICATION REGISTRY              Not Included
INPUT TEMPLATE                        Not Included
LIST TEMPLATE                         Not Included
MAIL GROUP                            Not Included
OPTION                                Not Included
PARAMETER DEFINITION                  Not Included
PARAMETER TEMPLATE                    Not Included
POLICY                                Not Included
POLICY FUNCTION                       Not Included
PRINT TEMPLATE                        Not Included
PROTOCOL                              Not Included
REMOTE PROCEDURE                      Not Included
ROUTINE                               Included
SECURITY KEY                          Not Included
SORT TEMPLATE                         Not Included
XULM LOCK DICTIONARY                  Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.
```

```
   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
-------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                           <><><>


===============================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

===============================================================================
```

2.2.5.2.2 SQA Analysis - XU*8.0*688 Message

Figure 25 shows the **SQA Analysis - XU*8.0*688** message contents from the **Send the Report in MailMan Messages** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

NOTE: To retrieve the email sent with the "Send the Report in MailMan Messages" Action from the KIDS Build Analyzer Option, follow the prompts indicated in Figure 21.

Figure 25: Reviewing the "Send the Report in MailMan Messages" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: SQA Analysis - XU*8.0*688 Message

```
Subj: SQA Analysis - XU*8.0*688  [#176990] 04/27/23@18:33  9 lines
From: KERNEL BUILD ANALYZER  In 'IN' basket.   Page 1  *New*
------------------------------------------------------------------------------

ALL ^XTMP calls have zero nodes defined in this build's routines

XUSER3

 ^( ..........................................................................
   VALN1DEA +8  I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
               EN^DDIOL($C(7)_"Provider DEA number is already associated to
               another profile. Please check the number entered.") K X
```

2.2.5.2.3 Routine and Component Text - XU*8.0*688 Message

Figure 26 shows the **Routine and Component Text - XU*8.0*688** message contents from the **Send the Report in MailMan Messages** action from the **KIDS Build Analyzer** option including SQA checklist items, component descriptions, and routine text:

NOTE: To retrieve the email sent with the "Send the Report in MailMan Messages" Action from the KIDS Build Analyzer Option, follow the prompts indicated in Figure 21.

Figure 26: Reviewing the "Send the Report in MailMan Messages" Action Results—Output *with* SQA Checklist Items, Component Descriptions, and Routine Text: Routine and Component Text - XU*8.0*688 Message

```
Subj: Routine and Component Text - XU*8.0*688  [#176991] 04/27/23@18:33
285 lines
From: KERNEL BUILD ANALYZER  In 'IN' basket.   Page 1  *New*
------------------------------------------------------------------------------
Descriptions and other text associated with this build (for review and
spell check):


BUILD: XU*8.0*688
See FORUM Patch description.


FILE: NEW PERSON

SUBFILE 200.5321; FIELD: .01: DEA NUMBER
This field is used to enter the provider's Drug Enforcement Administration
(DEA) number(s). Enter the DEA number as two upper case letters followed
by 7 digits. e.g., AA1234567.
HELP-PROMPT:
Enter DEA number in the format 2 upper case letters followed by 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number


FIELD: 53.2: DEA#
This field is used to enter the Drug Enforcement Agency (DEA) number.
Enter the DEA number as two upper case letters followed by 7 digits.
e.g., AA1234567.
HELP-PROMPT:
Enter the DEA number 2 letters 7 numbers.
TECHNICAL DESCRIPTION:
This is the algorithm for the DEA number
HELP-PROMPT: missing.


FILE: DEA BUSINESS ACTIVITY CODES
The DEA BUSINESS ACTIVITY CODES FILE is associated with the DEA numbers
and provider information in the DEA NUMBERS file.  This file links a
provider with the type of service provided.  It contains BUSINESS
ACTIVITY CODES that are supplied by the DOJ/DEA web service.

 Field - BUSINESS ACTIVITY (#.02):
 Description:
     This field holds the Business Activity value used for DEA numbers. This
     value can currently be one of the following:
```

```
    A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,S,T or U

    This value, combined with a numeric business sub-type, categorizes a DEA
    number.
Help-Prompt:
    Enter the Business Activity value for used for DEA numbers. Answer must
    be 1-3 characters in length.

Field - BUSINESS ACTIVITY DESCRIPTION (#1):
Description:
    This is the description given for the Business Activity Code and Sub-code.
Help-Prompt:
    Enter the Business Activity description given for the Business Activity
    code and Business Activity Sub-code. Answer must be 3-60 characters in length.

Field - BUSINESS ACTIVITY SUB-CODE (#.03):
Description:
    DEA uses an alpha character business activity code to identify various
    categories of registrants. For example business activity code "C"
    indicates a "Practitioner". DEA added a business activity sub-code field
    to identify new sub-categories of registrants.
    For example business activity code "C" in combination with business
    activity sub-code "1" indicates a practitioner who has received a Drug
    Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
    office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
    DW/275). As new sub-categories of business activities become regulated,
    additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
    assigned. MLP = Mid-Level Practitioner. NG = National Guard
Help-Prompt:
    Enter the business activity sub-code associated with the Business
    Activity Code. Answer must be 1-3 characters in length.

Field - FULL BUSINESS ACTIVITY CODE (#.01):
Description:
    DEA uses an alpha character business activity code to identify various
    categories of registrants. For example business activity code "C"
    indicates a "Practitioner". DEA added a business activity sub-code field
    to identify new sub-categories of registrants.
    For example business activity code "C" in combination with business
    activity sub-code "1" indicates a practitioner who has received a Drug
    Addiction Treatment Act (DATA) Waiver (DATA Waived or DW) to provide
    office based opioid treatment to 30 or 100 or 275 patients (DW/30, DW/100,
    DW/275). As new sub-categories of business activities become regulated,
    additional sub-code combinations (e.g. C-2, C-3, A-1, etc.) will be
    assigned. MLP = Mid-Level Practitioner. NG = National Guard.
Help-Prompt:
    Enter the full business activity code. This is composed of the Business
    activity code and sub-code used for DEA numbers. Answer must be 2-4 characters
    in length.

Field - MANUAL ENTRY DATE/TIME (#2):
Description:
    This field should only be populated when a new Business Activity Code
    (BAC) is entered manually due to the failure of the PSO DOJ/DEA WEB
    SERVICE to establish a connection to the DOJ web server.
Help-Prompt:
    This is the date/time this Business Activity Code was manually entered.
```

```
FILE: DEA NUMBERS
The DEA NUMBERS FILE is designed to contain demographic and permission
information about a provider related to the ability to order controlled
substance prescriptions.

 Field - ADDITIONAL COMPANY INFO (#1.2):
 Description:
     This is the additional company information of the person or institution
     associated with this DEA Number.
 Help-Prompt:
     Enter additional company info for the given person/institution. Answer
     must be 1-40 characters in length.

 Field - BUSINESS ACTIVITY CODE (#.02):
 Description:
     This is the business activity code related to this DEA Number.
 Help-Prompt:
     Enter the Business Activity code given to this DEA Number.

 Field - CITY (#1.5):
 Description:
     This is the city of the permanent address of the person or institution
     related to this DEA Number.
 Help-Prompt:
     Enter the city of the permanent address of the person or institution
     associated with this DEA Number. Answer must be 1-33 characters in length.

 Field - DEA NUMBER (#.01):
 Description:
     This field is used to enter the providers' Drug Enforcement Administration
     (DEA) number. Enter the DEA number as two upper case letters followed
     by 7 digits. e.g., AA1234567.
 Help-Prompt:
     Enter the DEA number in the format of 2 letters followed by 7 numbers.

 Field - DETOX NUMBER (#.03):
 Description:
     If the DEA provider has detox privileges, this field will be populated
     with a 'VX' or 'XA' followed by the numeric portion of the DEA number.
 Help-Prompt:
     Enter the detox number associated with this DEA Number. Answer must be 9
     characters in length.

 Field - EXPIRATION DATE (#.04):
 Description:
     This is the date of expiration for the DEA Number.
 Help-Prompt:
     Enter the date this DEA Number expires.

 Field - LAST DOJ UPDATE DATE/TIME (#10.3):
 Description:
     This is the date/time the DOJ (Department of Justice) data was used to
     update this DEA record.
 Help-Prompt:
     Enter the date/time this DEA record was last updated by the DOJ source.

 Field - LAST UPDATED BY (#10.1):
 Description:
     This is the person from the NEW PERSON file who last initiated an update
```

```
    to this DEA record.
Help-Prompt:
    Enter the person who last updated this DEA record.

Field - LAST UPDATED DATE/TIME (#10.2):
Description:
    This is the date/time of the last update to this DEA record.
Help-Prompt:
    Enter the date/time this DEA record was last updated.

Field - NAME (PROVIDER OR INSTITUTION) (#1.1):
Description:
    This is the name of the facility or person who is associated with this
    DEA Number.
Help-Prompt:
    Enter the name associated with this DEA Number. Answer must be 1-40
    characters in length.

Field - SCHEDULE II NARCOTIC (#2.1):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II drugs.
Help-Prompt:
    DEA number allows for schedule II drugs?

Field - SCHEDULE II NON-NARCOTIC (#2.2):
Description:
    This field is used to determine if the provider has privileges for
    Schedule II non-narcotic.
Help-Prompt:
    Provider has privileges for schedule II non-narcotic?

Field - SCHEDULE III NARCOTIC (#2.3):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III narcotic.
Help-Prompt:
    Provider has privileges for schedule III narcotic?

Field - SCHEDULE III NON-NARCOTIC (#2.4):
Description:
    This field is used to determine if the provider has privileges for
    Schedule III non-narcotic.
Help-Prompt:
    Provider has privileges for schedule III non-narcotic?

Field - SCHEDULE IV (#2.5):
Description:
    This field is used to determine if the provider has privileges for
    Schedule IV controlled substances.
Help-Prompt:
    Provider has privileges for schedule IV?

Field - SCHEDULE V (#2.6):
Description:
    This field is used to determine if the provider has privileges for
    Schedule V controlled substances.
Help-Prompt:
    Provider has privileges for schedule V?
```

```
 Field - STATE (#1.6):
 Description:
     This is the state of the permanent address of the person or institution
     associated with this DEA Number.
 Help-Prompt:
     Enter the state of the permanent address associated with the person or
     institution associated with this DEA Number.

 Field - STREET ADDRESS 1 (#1.3):
 Description:
     This is the first line of the street address of the permanent address of
     the person or institution associated with this DEA Number.
 Help-Prompt:
     Enter street address line 1 for the given person/institution. Answer must
     be 1-40 characters in length.

 Field - STREET ADDRESS 2 (#1.4):
 Description:
     This is the second line of the street address of the permanent address of
     the person or institution associated with this DEA Number.
 Help-Prompt:
     Enter street address line 2 for the given person/institution. Answer must
     be 1-40 characters in length.

 Field - TYPE (#.07):
 Description:
     This identifies whether the DEA number is an individual DEA number or an
     Institutional DEA number.
 Help-Prompt:
     Enter the usage type for the DEA. The DEA usage type may be 'Individual',
     or 'Institutional.

 Field - USE FOR INPATIENT ORDERS? (#.06):
 Description:
     This field indicates if this DEA number can be used for inpatient orders.
 Help-Prompt:
     Can this DEA be used for inpatient orders? Answer 'YES' or 'NO'.

 Field - ZIP CODE (#1.7):
 Description:
     This is the postal ZIP code of the person or institution associated with
     this DEA Number.
 Help-Prompt:
     Enter the ZIP CODE or ZIP+4. Answer must be 5-9 characters in length.

================================================================================

Text in ROUTINES between quotes and/or after ;;, by line number:


XUSER3
  3: Per VA Directive 6402, this routine should not be modified.
 10: Exceeds maximum length (9).
 11: Less than minimum length (9).
 12: Invalid format. Must be 2 upper case letters followed by 7 digits.
 14: Provider DEA number is already associated to another profile. Please check
     the number entered.
 15: DEA number is invalid.  Please check the number entered.
```

```
 16: DEA number doesn't match provider's last name. Please verify the
     information.
 21: Type <Enter> to continue
 27: Exceeds maximum length (9).
 28: Less than minimum length (9).
 29: Invalid format. Must be 2 upper case letters followed by 7 digits.
 32: DEA number is invalid.  Please check the number entered.
 50: That Suffix is in use.
```

2.3 Delete Build Analyzer Text Files Option

Use the **Delete Build Analyzer Text Files** [XPDANLYZ_DEL] option to delete any previously generated **.txt** files.

Figure 27 demonstrates using the **Delete Build Analyzer Text Files** [XPDANLYZ_DEL] option:

Figure 27: Running the Delete Build Analyzer Text Files Option—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 2 <Enter> Delete Build Analyzer

Set the path to find the .TXT files
or accept the standard default.

PATH: /srv/vista/oak/user/hfs/  Replace <Enter>

Build Analyzer text files:

  1. XPBA_Anal_DI-22.0-31_04-14-22.TXT
  2. XPBA_Anal_XU-8.0-688_01-26-23.TXT
  3. XPBA_Anal_XU-8.0-770_01-20-23.TXT

Delete all the files above? NO// <Enter>

Select number of file or files to delete:  (1-3): 2
Deletions completed.
```

2.4 KIDS Build Analyzer - Full SQA Search Option

Use the **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] option to check the build with a full SQA check for SQA checklist items and naked references. The SQA logic in the Build Analyzer software goes through the **XPDARRR** array (Figure 28), which is set in the **XPDANYLZ2** routine, and checks for occurrences in the build routines.

Figure 28: SQA Logic—XPDARRR Array

```
SQA(RR) ;Sets SQA CL array XPDARRR
S XPDARRR("////",RR,0)=""
S XPDARRR("DIC(0)",RR,0)=""
S XPDARRR("^UTILITY",RR,0)=""
S XPDARRR("^TMP",RR,0)=""
S XPDARRR("^XTMP",RR,0)=""
S XPDARRR("%",RR,0)=""
S XPDARRR("$I",RR,0)=""
S XPDARRR("U=",RR,0)=""
S XPDARRR("K ^",RR,0)=""
S XPDARRR("K:",RR,0)=""
S XPDARRR("K @",RR,0)=""
S XPDARRR("^(",RR,0)=""
S XPDARRR("IO",RR,0)=""
```

The **KIDS Build Analyzer - Full SQA Search** option goes through the contents of the build routines line-by-line and checks for the following code variables, globals, array references, commands, and other code statements:

- **"////"**
- **"DIC(0)"**
- **"^UTILITY"**
- **"^TMP"**
- **"^XTMP"**
- **"%"**
- **"$I"**
- **"U="**
- **"K ^"**
- **"K:"**
- **"K @"**
- **"^("**
- **"IO"**
- **Naked References**—If found they appear in the SQA output section at the end of the report.

If there are any issues, as described in Section 3.9, "SQA Check—Full Lines," the Build Analyzer tool builds the **XPDSQA** array, which is set in the **XPDANYLZ2** routine and contains the errors found in the build (Figure 29).

Figure 29: Sample XPDSQA Array with Errors Found in a Build

```
XPDSQA("XUSER3","IO",10,"VALN1DEA +4")=" I $D(X) I $L(X)>9 K X D EN^DDIOL($C(7)_
"Exceeds maximum length (9).")"
XPDSQA("XUSER3","IO",11,"VALN1DEA +5")=" I $D(X) I $L(X)<9 K X D EN^DDIOL($C(7)_
"Less than minimum length (9).")"
XPDSQA("XUSER3","IO",12,"VALN1DEA +6")=" I $D(X) I '(X?2U7N) K X D EN^DDIOL($C(7
)_"Invalid format. Must be 2 upper case letters followed by 7 digits.")"
XPDSQA("XUSER3","IO",14,"VALN1DEA +8")=" I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X
)),$O(^(X,0))'=DA(1) D EN^DDIOL($C(7)_"Provider DEA number is already associated
 to another profile. Please check the number entered.") K X"
XPDSQA("XUSER3","IO",15,"VALN1DEA +9")=" I $D(X),'$$DEANUM(X) D EN^DDIOL($C(7)_"
DEA number is invalid.  Please check the number entered.") K X"
XPDSQA("XUSER3","IO",16,"VALN1DEA +10")=" I $D(X),'F,$D(DA(1)),$E(X,2)'=$E($P(^V
A(200,DA(1),0),"^")) D EN^DDIOL($C(7)_"DEA number doesn't match provider's last
name. Please verify the information.") D VALN1P"
XPDSQA("XUSER3","IO",27,"VALN2DEA +3")=" I $D(X) I $L(X)>9 K X D EN^DDIOL($C(7)_
"Exceeds maximum length (9).")"
XPDSQA("XUSER3","IO",28,"VALN2DEA +4")=" I $D(X) I $L(X)<9 K X D EN^DDIOL($C(7)_
"Less than minimum length (9).")"
XPDSQA("XUSER3","IO",29,"VALN2DEA +5")=" I $D(X) I '(X?2U7N) K X D EN^DDIOL($C(7
)_"Invalid format. Must be 2 upper case letters followed by 7 digits.")"
XPDSQA("XUSER3","IO",32,"VALN2DEA +8")=" I $D(X),'$$DEANUM(X) D EN^DDIOL($C(7)_"
DEA number is invalid.  Please check the number entered.") K X"
XPDSQA("XUSER3","IO",50,"SUFCHK +4")=" I $D(^VA(200,"F",NPDEATXT,X)) D EN^DDIOL(
$C(7)_"That Suffix is in use.  ","","!,?5") S RESPONSE=1"
XPDSQA("XUSER3","^(",14,"VALN1DEA +8")=" I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X
)),$O(^(X,0))'=DA(1) D EN^DDIOL($C(7)_"Provider DEA number is already associated
 to another profile. Please check the number entered.") K X"
```

Figure 30 shows the results when running the **KIDS Build Analyzer - Full SQA Search** option and answering **NO** to the following prompt:

"Do you want to include a section that displays the component descriptions and text found in routines? NO//" **NO**

Figure 30: Running the KIDS Build Analyzer - Full SQA Search Option: Print Report Action—System Prompts and User Entries

```
Select Utilities <TEST ACCOUNT> Option: XPDANLYZ MAIN MENU <Enter> Build Analyzer Main
Menu

   1      KIDS Build Analyzer
   2      Delete Build Analyzer Text Files
   3      KIDS Build Analyzer - Full SQA Search

Select Build Analyzer Main Menu <TEST ACCOUNT> Option: 3 <Enter> KIDS Build Analyzer -
Full SQA Search

This tool is used to analyze and list the components of a build to identify adherence
to standards and best practices.

Select Build Name: XU*8*688 <Enter> KERNEL

Namespace: XU
Package: KERNEL

Do you want to include a section that displays the component descriptions
and text found in routines? NO// NO

Analysis Results Display Choices:

1. Print the Report
2. Create the Report in .TXT Files
3. Send the Report in MailMan Messages

Select number:  (1-3): 1 <Enter>  . . .

Print Analysis to which Device:   HOME// ;;9999999  TELNET PORT    Right Margin:
 80// <Enter>
```

Figure 31: Reviewing the Print the Report Action—Output from the KIDS Build Analyzer - Full SQA Search Option

```
XU*8.0*688 BUILD OVERVIEW                                  Feb 01, 2023@09:33:36
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*688  ***
------------------------------------------------------------------------------
FILE:

   NEW PERSON (#200)
     Field Issues:
     * DETOX CALCULATED (#9001) - Field Description missing.
     * DETOX CALCULATED (#9001) - Help Prompt missing.

   DEA BUSINESS ACTIVITY CODES (#8991.8)
     No issues noted.

   DEA NUMBERS (#8991.9)
     No issues noted.
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XUSER3 ;ISF/RWF - New Person File Utilities ;02/01/2022
  ;;8.0;KERNEL;**688**;Jul 10, 1995;Build 58
  ;;Per VA Directive 6402, this routine should not be modified.

     * Date of Last ^XINDEX: JAN 24, 2023
```

```
                          <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================

ALL ^XTMP calls have zero nodes defined in this build's routines

XUSER3

 IO ..............................................................................
   VALN1DEA +4   I $D(X) I $L(X)>9 K X D EN^DDIOL($C(7)_"Exceeds maximum length
                 (9).")
   VALN1DEA +5   I $D(X) I $L(X)<9 K X D EN^DDIOL($C(7)_"Less than minimum
                 length (9).")
   VALN1DEA +6   I $D(X) I '(X?2U7N) K X D EN^DDIOL($C(7)_"Invalid format. Must
                 be 2 upper case letters followed by 7 digits.")
   VALN1DEA +8   I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
                 EN^DDIOL($C(7)_"Provider DEA number is already associated to
                 another profile. Please check the number entered.") K X
   VALN1DEA +9   I $D(X),'$$DEANUM(X) D EN^DDIOL($C(7)_"DEA number is invalid.
                 Please check the number entered.") K X
   VALN1DEA +10  I $D(X),'F,$D(DA(1)),$E(X,2)'=$E($P(^VA(200,DA(1),0),"^")) D
                 EN^DDIOL($C(7)_"DEA number doesn't match provider's last name.
                 Please verify the information.") D VALN1P
   VALN2DEA +3   I $D(X) I $L(X)>9 K X D EN^DDIOL($C(7)_"Exceeds maximum length
                 (9).")
   VALN2DEA +4   I $D(X) I $L(X)<9 K X D EN^DDIOL($C(7)_"Less than minimum
                 length (9).")
   VALN2DEA +5   I $D(X) I '(X?2U7N) K X D EN^DDIOL($C(7)_"Invalid format. Must
                 be 2 upper case letters followed by 7 digits.")
   VALN2DEA +8   I $D(X),'$$DEANUM(X) D EN^DDIOL($C(7)_"DEA number is invalid.
                 Please check the number entered.") K X
   SUFCHK +4     I $D(^VA(200,"F",NPDEATXT,X)) D EN^DDIOL($C(7)_"That Suffix is
                 in use.  ","","!,?5") S RESPONSE=1

 ^( ..............................................................................
   VALN1DEA +8   I $D(X),'F,$D(DA(1)),$D(^VA(200,"PS4",X)),$O(^(X,0))'=DA(1) D
                 EN^DDIOL($C(7)_"Provider DEA number is already associated to
                 another profile. Please check the number entered.") K X

**  Analysis Complete  **

Press <Enter> or '^' to exit:
```

The **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] option (see Figure 31) provides more SQA data checks than the **KIDS Build Analyzer** [XPDANLYZ] option and selecting **YES** at the "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" prompt (see Figure 10).

The following are examples show the different output for the same build using either the **KIDS Build Analyzer** [XPDANLYZ] option and selecting **YES** at the "Do you want to include a section that displays the routine lines containing specific code references reviewed on the SQA checklist? NO//" prompt or using the **KIDS Build Analyzer - Full SQA Search** [XPDANLYZ_SQA] option.

Figure 32: Sample Output—KIDS Build Analyzer - Full SQA Search Option: ZZDAVE*1*2 Build

```
ZZDAVE*1.0*2 BUILD OVERVIEW                                  May 24, 2023@12:36:57
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Not Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included


Warning:  Build not set to track package nationally
          Please validate that is correct.


Warning:  The PACKAGE FILE LINK is missing.
          This should be defined for a national VISTA product build.
------------------------------------------------------------------------------


*** Detailed results for components included in build ZZDAVE*1.0*2  ***
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 ZZDSTEST ;
  K ^SRF K ^SRF(0) K ^SRAFY(139.9) K ^SRAFY(139.9,0)

     * ZZDSTEST is not in the Package namespace.
     * Date ^XINDEX last run was not found.
     * Missing current patch number on second line.
```

```
                          <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================

ALL ^XTMP calls have zero nodes defined in this build's routines

ZZDSTEST

 K @ ..........................................................................
   ZZDSTEST +2  K @^KILLME
   ZZDSTEST +3  K @KILLME

 K ^ ..........................................................................
   ZZDSTEST +1  K ^SRF K ^SRF(0) K ^SRAFY(139.9) K ^SRAFY(139.9,0)
   ZZDSTEST +4  K ^TMP(XXX,$J) K ^UTILITY("SOMETHING")

 ^TMP .........................................................................
   ZZDSTEST +4  K ^TMP(XXX,$J) K ^UTILITY("SOMETHING")

 ^UTILITY .....................................................................
   ZZDSTEST +4  K ^TMP(XXX,$J) K ^UTILITY("SOMETHING")

**  Analysis Complete  **
```

Figure 33: Sample Output—KIDS Build Analyzer Option with SQA Option: ZZDAVE*1*2 Build

```
ZZDAVE*1.0*2 BUILD OVERVIEW                                  May 24, 2023@12:30:23
-------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Not Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included


Warning:  Build not set to track package nationally
          Please validate that is correct.


Warning:  The PACKAGE FILE LINK is missing.
          This should be defined for a national VISTA product build.
-------------------------------------------------------------------------------


*** Detailed results for components included in build ZZDAVE*1.0*2  ***
-------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 ZZDSTEST ;
  K ^SRF K ^SRF(0) K ^SRAFY(139.9) K ^SRAFY(139.9,0)

     * ZZDSTEST is not in the Package namespace.
     * Date ^XINDEX last run was not found.
     * Missing current patch number on second line.
```

```
                          <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
 exist for each external reference.

================================================================================


These ^TMP calls have kill statements within the included routines:

^TMP(XXX,$J
          ZZDSTEST    ZZDSTEST +4


All ^TMP calls have at least one kill statement in this build's routines.

ALL ^XTMP calls have zero nodes defined in this build's routines

ZZDSTEST

 K @ ..........................................................................
   ZZDSTEST +2  K @^KILLME
   ZZDSTEST +3  K @KILLME

 K ^ ..........................................................................
   ZZDSTEST +1  K ^SRF K ^SRF(0) K ^SRAFY(139.9) K ^SRAFY(139.9,0)

 ^UTILITY .....................................................................
   ZZDSTEST +4  K ^TMP(XXX,$J) K ^UTILITY("SOMETHING")

**  Analysis Complete  **
```

Figure 34: Sample Output—KIDS Build Analyzer - Full SQA Search Option: XU*8.0*782 Build

```
XU*8*782 BUILD OVERVIEW                                    May 25, 2023@14:11:17
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Not Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8*782  ***
------------------------------------------------------------------------------
OPTION:

   XPD UTILITY
     No issues noted.

   XPDANLYZ
     No issues noted.

   XPDANLYZ_DEL
     No issues noted.

   XPDANLYZ_SQA
     No issues noted.

   XPDANLYZ MAIN MENU
     * PACKAGE field (#12) missing.
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
```

```
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XPDANLYZ1 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ2 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ3 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ4 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ5 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ6 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
```

```
 exist for each external reference.

================================================================================


General ^XTMP Notes
These ^XTMP calls have zero nodes defined in this build's included routines:
     Routine: XPDANLYZ5     ^XTMP(".E1",0)=".E1(1"^",1"_U_").E D

These ^XTMP calls have no zero nodes defined in this build's included routines
     Routine: XPDANLYZ5     ^XTMP("
     Routine: XPDANLYZ5     ^XTMP("_$P(XRRR

XPDANLYZ1

 % .....................................................................
   START +3     N X,XPDATE,XPDLINE,XPDBN,%,%H,%I D NOW^%DTC S XPDATE=X,XPDIS=1
   PME +1       I XPDIS=1 S END=0 N POP,IO,IOP,%ZIS,ZTIO  D  G:POP X1
   PME +2       . W ! S %ZIS("A")="Print Analysis to which Device:   " S %ZIS="
                MQ" D ^%ZIS Q:POP  Q:'$G(ZTIO)']""
   PME +7       .. D ^%ZTLOAD
   PME +11      .. D HOME^%ZIS
   PME +12      .. K %ZIS
   X1 +0        X1 D ^%ZISC S:$D(ZTQUEUED) ZTREQ="@" K DIR,DIC,XPDFARR,FLDARR,
                XPDRC,Y W @IOF Q

 IO ....................................................................
   START +0     START(XPDRC) ; OPTION XPDANLYZ which passes XPDRC=4 an XPDRC=5
                to run initially for build
   START +5     I XPDRC=6 S XPDRC=4,XTOG=1  ;SHOW SQA LINES IN ANALYSIS
                SECTION (NEEDS OPTION CREATED IF WANTED)
   START +6     I XPDRC=1 S XPDLINE="File Analysis" D FILENUM^XPDANLYZ4  ;
                THESE THREE HAVE NOT BEEN USED RECENTLY.  IF WANTED, WILL NEED
                CODE CHECKED AND OPTIONS ADDED
   PME +1       I XPDIS=1 S END=0 N POP,IO,IOP,%ZIS,ZTIO  D  G:POP X1
   PME +2       . W ! S %ZIS("A")="Print Analysis to which Device:   " S %ZIS="
                MQ" D ^%ZIS Q:POP  Q:'$G(ZTIO)']""
   PME +3       . I $D(IO("Q")) D  ;queue the report
   PME +13      . I $D(IO("Q")) K IO("Q") S END=1 Q
   PME +16      . U IO
   PME +17      . I $E(IOST,1,2)="C-" W @IOF  ;sending to screen, so clear
                screen first
   PNT +20      ... S:XPDCOMP="OPTION" XPDW(XPDCNT)="Option Description" S:
                XPDCOMP="REMOTE PROCEDURE" XPDW(XPDCNT)="RPC Description" S:
                XPDCOMP="MAIL GROUP" XPDW(XPDCNT)="Mail Group Description"
   PNT +22      ... I XPDARR(XPDCOMP,XPDNUM,"DESCRIPT")="Yes" N II S II=0 F  S
                II=$O(XPDARR(XPDCOMP,XPDNUM,"DESCRIPTION",II)) Q:'II  S XPDCNT=
                XPDCNT+1,XPDW(XPDCNT)=XPDARR(XPDCOMP,XPDNUM,"DESCRIPTION",II)
   PNT +23      ... I XPDARR(XPDCOMP,XPDNUM,"DESCRIPT")="No" S XPDCNT=XPDCNT+1,
                XPDW(XPDCNT)="     DESCRIPTION missing."
   PNT +42      . N RR S RR=0 F  S RR=$O(XPDW(RR)) Q:'RR  W !,XPDW(RR) I ($Y+5)
                >IOSL S TMPT=XPDLINE_" - (continued)" D HDR(TMPT) Q:END
   PNT +48      . N RR S RR=0 F  S RR=$O(XPBA1(RR)) Q:'RR  W !,XPBA1(RR) I $E(
                IOST,1,2)="C-",($Y+5)>IOSL S LNUM=$O(XPDHR(RR+2),-1),TMPT=
                XPDARR("BUILD",XPDBB,"NAME")_" - "_XPDHR(LNUM)_" (cont.)" D
                HDR(TMPT) Q:END
   PNT +50      . I ('XPDR)&('XPQR) S END=1 Q  ;ONLY WANT TO SEE ANLYSIS
                SECTION
   PNT +53      .. N LL S LL=0 F  S LL=$O(XPMM(LL)) Q:'LL  W !,XPMM(LL) I $E(
```

```
                IOST,1,2)="C-",($Y+5)>IOSL N AA S AA=LL,AA=$O(XPDROUT(AA),-1),
                TMPT=XPDARR("BUILD",XPDBB,"NAME")_" - SQA LINE REVIEW, "_
                XPDROUT($G(AA,0))_" (cont.)" D HDR(TMPT) Q:END
   PNT +55      .. W !,XPDMM(TTT) I $E(IOST,1,2)="C-",($Y+5)>IOSL S TMPT=
                XPDARR("BUILD",XPDBB,"NAME")_" - TEXT REVIEW (cont.)" D HDR(
                TMPT) Q:END
   PNT +70      . I ('XPDR)&('XPQR) S END=1 Q  ;ONLY WANT TO SEE ANLYSIS
                SECTION
   PNT +86      . I ('XPDR)&('XPQR) S END=1 ;ONLY WANT TO SEE ANLYSIS SECTION
   X2 +0        X2 I $E(IOST,1,2)="C-" D
   X1 +0        X1 D ^%ZISC S:$D(ZTQUEUED) ZTREQ="@" K DIR,DIC,XPDFARR,FLDARR,
                XPDRC,Y W @IOF Q
   HDR +1       I $E(IOST,1,2)="C-" D  G:END X1
   HDR +7       I $E(IOST,1,2)="C-" W @IOF  W !,HTXT,$$RJ^XLFSTR($$FMTE^XLFDT(
                XPDATE),79-$L(HTXT)," ")

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XPDANLYZ2

 $I ..........................................................................
   SQA +7       S XPDARRR("$I",RR,0)=""
   RLINES +35   ... I (XPD1="$I"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^
                XPDANLYZ5(RTN(K,0),XPD1) Q:'TCHK

 % ............................................................................
   XREF +9      .... I JJ=$P(^DD(LL,MM,1,PP,0),"^",2),'$D(^DD(LL,MM,1,PP,"%D"))
                 S XPDARR("FILE",FXX,MM,"WARNING","XREF")=$P(^DD(LL,MM,1,PP,0),
                "^",2)_" cross-reference ("_RSF_" #"_MM_") - DESCRIPTION
                missing."
   SQA +6       S XPDARRR("%",RR,0)=""
   RLINES +13   . N X S X=ROU X ^%ZOSF("TEST") Q:'$T
   RLINES +14   . K RTN S XCNP=0,DIF="RTN(" X ^%ZOSF("LOAD")
   RLINES +33   ... I (XPD1="%"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^XPDANLYZ5(
                RTN(K,0),XPD1) Q:'TCHK  ;$$GCHK^XPDANLYZ5(RTN(K,0),XPD1) D
   RSPELL +1    N X S X=ROU X ^%ZOSF("TEST") Q:'$T
   RSPELL +2    K RTN S XCNP=0,DIF="RTN(" X ^%ZOSF("LOAD")

 //// ..........................................................................
   SQA +1       S XPDARRR("////",RR,0)=""

 DIC(0) .......................................................................
   G1 +1        . N DIC,Y S DIC=19,DIC(0)="QEAM",DIC("A")="Select individual
                options by name: "
   RPC1 +1      . N DIC S DIC=8994,DIC(0)="QEAM",DIC("A")="Select individual
                RPCs by name: "
   SQA +2       S XPDARRR("DIC(0)",RR,0)=""
   RLINES +36   ... I (XPD1="DIC(0)"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^
                XPDANLYZ5(RTN(K,0),XPD1) Q:'TCHK
   RSPELL +12   ... Q:TMP[("DIC="_$C(34)_XTXT)  Q:TMP[("DIC(0)="_$C(34)_XTXT)
                Q:TMP[("DR="_$C(34)_XTXT)  Q:TMP[("DIE="_$C(34)_XTXT)  Q:TMP[("
                DIC(""S"")="_$C(34)_XTXT)

 IO ...........................................................................
   XREF +9      .... I JJ=$P(^DD(LL,MM,1,PP,0),"^",2),'$D(^DD(LL,MM,1,PP,"%D"))
                 S XPDARR("FILE",FXX,MM,"WARNING","XREF")=$P(^DD(LL,MM,1,PP,0),
                "^",2)_" cross-reference ("_RSF_" #"_MM_") - DESCRIPTION
                missing."
   OPTME +1     N XPDOARR,KK S KK=0 ;XPDRC=2 IS OPTION
```

```
  G1 +5        . I $G(Y)]"" S XPDOARR($P(Y,"^"))=$P(Y,"^",2),KK=KK+1 ;OPTION
               ien ^ NAME
  G1 +16       . N JJ S JJ=0 F  S JJ=$O(XPDOARR(JJ)) Q:'JJ  W !,?5,XPDOARR(JJ)
                I ($Y+5)>IOSL D HDR^XPDANLYZ1("Options (continued): ") Q:END
  OCHK +0      OCHK(XPDORR) ;setting up information to check OPTIONS ENTRY/
               EXIT for files and routines.
  OCHK +3      .. S XPDARR("OPTION",JJ,"NAME")=XPDORR(JJ)
  OCHK +4      .. I '$D(TARR(19,XPDIENS,3.5)) S XPDARR("OPTION",JJ,"DESCRIPT")
               ="No",XPDARR("OPTION",JJ,"WARNING","DESCRIPTION")="DESCRIPTION
               field (#3.5) missing."
  OCHK +5      .. I $D(TARR(19,XPDIENS,3.5)) S XPDARR("OPTION",JJ,"DESCRIPT")=
               "Yes" N LL S LL=0 F  S LL=$O(TARR(19,XPDIENS,3.5,LL)) Q:'LL  S
               XPDARR("OPTION",JJ,"DESCRIPTION",LL)=TARR(19,XPDIENS,3.5,LL)
  OCHK +6      .. I $D(TARR(19,XPDIENS,1)) S XPDARR("OPTION",JJ,"Menu")=TARR(
               19,XPDIENS,1)
  OCHK +7      .. I '$D(TARR(19,XPDIENS,1)) S XPDARR("OPTION",JJ,"WARNING","
               MENU TXT")="MENU TEXT field (#1) missing."
  OCHK +8      .. I '$D(TARR(19,XPDIENS,12)) S XPDARR("OPTION",JJ,"WARNING","
               PKG")="PACKAGE field (#12) missing."
  OCHK +9      .. I $D(TARR(19,XPDIENS,12)) S XPDARR("OPTION",JJ,"PKG")=TARR(
               19,XPDIENS,12)
  OCHK +16     S XPDCS("OPTION")=19
  RPC1 +15     . N JJ S JJ=0 F  S JJ=$O(XPDCARR(JJ)) Q:'JJ  W !,?5,XPDCARR(JJ)
                I ($Y+5)>IOSL D HDR^XPDANLYZ1("RPC (continued): ") Q:END
  RPC2 +5      .. I '$D(TARR(8994,XPDIENS,"DESCRIPTION")) S XPDARR("REMOTE
               PROCEDURE",JJ,"DESCRIPT")="No",XPDARR("REMOTE PROCEDURE",JJ,"
               WARNING","DESCRIPTION")="DESCRIPTION field (#1) missing."
  RPC2 +6      .. I $D(TARR(8994,XPDIENS,"DESCRIPTION")) S XPDARR("REMOTE
               PROCEDURE",JJ,"DESCRIPT")="Yes" N LL S LL=0 F  S LL=$O(TARR(
               8994,XPDIENS,"DESCRIPTION",LL)) Q:'LL  S XPDARR("REMOTE
               PROCEDURE",JJ,"DESCRIPTION",LL)=TARR(8994,XPDIENS,"DESCRIPTION"
               ,LL)
  RPC2 +8      .. I $D(TARR(8994,XPDIENS,"RETURN VALUE TYPE")),'$D(TARR(8994,
               XPDIENS,"RETURN PARAMETER DESCRIPTION")) S XPDARR("REMOTE
               PROCEDURE",JJ,"WARNING","RETURN DESCRIPTION")="RPC RETURN
               DESCRIPTION field (#3) missing."
  RPC2 +11     ... N MM F MM=1:1:XPDIP I '$D(TARR(8994.02,MM_","_XPDIENS,"
               DESCRIPTION")) S XPDARR("REMOTE PROCEDURE",JJ,"WARNING","INPUT
               DESCRIPTION")="RPC Input Description for "_TARR(8994.02,MM_","_
               XPDIENS,"INPUT PARAMETER")_" missing."
  SQA +13      S XPDARRR("IO",RR,0)=""
  COMP1 +1     S XPDCS("APPLICATION ACTION")=1.61
  COMP1 +6     S XPDCS("FUNCTION")=.5
  COMP1 +8     S XPDCS("HL7 APPLICATION PARAMETER")=771
  COMP1 +9     S XPDCS("HLO APPLICATION REGISTRY")=779.2
  COMP1 +15    S XPDCS("OPTION")=19
  COMP1 +16    S XPDCS("PARAMETER DEFINITION")=8989.51
  COMP1 +19    S XPDCS("POLICY FUNCTION")=1.62
  COMP1 +26    S XPDCS("XULM LOCK DICTIONARY")=8993
  RLINES +34   ... I (XPD1="IO"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^
               XPDANLYZ5(RTN(K,0),XPD1) Q:'TCHK
  RSPELL +10   ... I CLTXT]"" I $L(XTXT)>(2*$L(CLTXT)) Q  ;NUMBER,PUNCUATION,
               FEW LETTERS

K @ ..........................................................................
  SQA +11      S XPDARRR("K @",RR,0)=""

K ^ ..........................................................................
  SQA +9       S XPDARRR("K ^",RR,0)=""
```

```
  FMSG +2       K ^TMP("XPDEM",$J)
  RLINES +32    ... I (XPD1="K ^"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$KCHK^
                XPDANLYZ5(RTN(K,0),XPD1) Q:TCHK'=3

U= ..............................................................................
  SQA +8        S XPDARRR("U=",RR,0)=""
  RLINES +2     N TCNT S (JJ,TCNT)=0 F  S JJ=$O(XPDARR("BUILD",XPDBIEN,"
                ROUTINE",JJ)) Q:'JJ  S ROU=XPDARR("BUILD",XPDBIEN,"ROUTINE",JJ)
                 D
  RLINES +37    ... I XPD1="U=",'XPDIS2,(RTN(K,0)["U=""^""")!(RTN(K,0)'?.E1P1"
                U=") Q

^( ..............................................................................
  SQA +12       S XPDARRR("^(",RR,0)=""

^TMP ............................................................................
  SQA +4        S XPDARRR("^TMP",RR,0)=""
  FMSG +2       K ^TMP("XPDEM",$J)
  FMSG +4       D LISTMSGS^XMXAPIB(XPDUZ,"*","SUBJ;DATE;F","B",,,.XMCRIT,"^TMP(
                ""XPDEM"",$J)")
  FMSG +5       I $D(^TMP("XPDEM",$J)) D
  FMSG +6       . N JKL,XPDNIEN S JKL=$O(^TMP("XPDEM",$J,"XMLIST",0)) Q:'$G(
                JKL)    S XPDNIEN=^TMP("XPDEM",$J,"XMLIST",JKL)
  RLINES +31    ... I XPD1="^TMP",'XPDIS2,RTN(K,0)[XPD1 D TMP^XPDANLYZ5(RTN(K,
                0)) I 'XPDIS2 Q:TCHK

^UTILITY ........................................................................
  SQA +3        S XPDARRR("^UTILITY",RR,0)=""

^XTMP ...........................................................................
  SQA +5        S XPDARRR("^XTMP",RR,0)=""
  RLINES +30    ... I XPD1="^XTMP",RTN(K,0)[XPD1 D TMPX^XPDANLYZ5(RTN(K,0)) I '
                XPDIS2 Q:TCHK  ;TMPX^ZZSRABA

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XPDANLYZ3

% ................................................................................
  CEE +19       ... N JKL,JS S JS=1,TMP="" I $E(TMP1,1)="%" S TMP="%",JS=2

IO ..............................................................................
  OPT +1        W @IOF,"Select product to perform a basic review of components.
                ",!
  NSST +6       . I XPDNOM="APPLICATION ACTION" S XPDCIEN=$O(^DIAC(1.61,"B",
                XPDNAM1,0))
  NSST +7       . I XPDNOM="OPTION" S XPDCIEN=$O(^DIC(19,"B",XPDNAM1,0))
  NSST +14      . I XPDNOM="FUNCTION" S XPDCIEN=$O(^DD("FUNC","B",XPDNAM1,0))
  NSST +17      . I XPDNOM="HL7 APPLICATION PARAMETER" S XPDCIEN=$O(^HL(771,"B"
                ,XPDNAM1,0))
  NSST +18      . I XPDNOM="HLO APPLICATION REGISTRY" S XPDCIEN=$O(^HLD(779.2,"
                B",XPDNAM1,0))
  NSST +22      . I XPDNOM="PARAMETER DEFINITION" S XPDCIEN=$O(^XTV(8989.51,"B"
                ,XPDNAM1,0))
  NSST +25      . I XPDNOM="POLICY FUNCTION" S XPDCIEN=$O(^DIAC(1.62,"B",
                XPDNAM1,0))
  NSST +29      . I XPDNOM="XULM LOCK DICTIONARY" S XPDCIEN=$O(^XLM(8993,"B",
                XPDNAM1,0))
  NSST +37      . I XPDNOM="OPTION" D OCHK^XPDANLYZ2(.XPDCARR) D CEE(.XPDCARR)
```

```
            Q
NSST +44    . D SKEY^XPDANLYZ3(.XPDCARR,XPDNOM,XPDX1,"DESCRIPTION") ;NAME
            ARRAY, COMPONENT NAME, COMPONENT FILE NUMBER
TROU +4     . N TARR S XPDIENS=JJ_"," D GETS^DIQ(ZZ,XPDIENS,"*","
            DESCRIPTION;ROUTINE INVOKED","TARR")
TROU +5     . I '$D(TARR) S XPDARR(XPDCX,JJ,"DESCRIPT")="No",XPDARR(ZZ,JJ,"
            WARNING","DESCRIPTION")="DESCRIPTION missing."
TROU +7     .. I '$D(TARR(ZZ,XPDIENS,"DESCRIPTION")) S XPDARR(XPDCX,JJ,"
            DESCRIPT")="No",XPDARR(XPDCX,JJ,"WARNING","DESCRIPTION")="
            DESCRIPTION missing."
TROU +8     .. I $D(TARR(ZZ,XPDIENS,"DESCRIPTION")) S XPDARR(XPDCX,JJ,"
            DESCRIPT")="Yes" N LL S LL=0 F  S LL=$O(TARR(ZZ,XPDIENS,"
            DESCRIPTION",LL)) Q:'LL  S XPDARR(XPDCX,JJ,"DESCRIPTION",LL)=
            TARR(ZZ,XPDIENS,"DESCRIPTION",LL)
BULL +4     . N TARR S XPDIENS=JJ_"," D GETS^DIQ(3.6,XPDIENS,"DESCRIPTION",
            "NR","TARR")
BULL +5     . I '$D(TARR) S XPDARR("BULLETIN",JJ,"DESCRIPT")="No",XPDARR("
            BULLETIN",JJ,"WARNING","DESCRIPTION")="DESCRIPTION field (#6)
            missing."
BULL +7     .. I '$D(TARR(3.6,XPDIENS,"DESCRIPTION")) S XPDARR("BULLETIN",
            JJ,"DESCRIPT")="No",XPDARR("BULLETIN",JJ,"WARNING","
            DESCRIPTION")="DESCRIPTION field (#6) missing."
BULL +8     .. I $D(TARR(3.6,XPDIENS,"DESCRIPTION")) S XPDARR("BULLETIN",
            JJ,"DESCRIPT")="Yes" N LL S LL=0 F  S LL=$O(TARR(3.6,XPDIENS,"
            DESCRIPTION",LL)) Q:'LL  S XPDARR("BULLETIN",JJ,"DESCRIPTION",
            LL)=TARR(3.6,XPDIENS,"DESCRIPTION",LL)
CEE +0      CEE(XPDOPTEE) ;CHECK OPTIONS ENTRY/EXIT FOR FILES AND ROUTINES
CEE +6      .. N XPLOC S XPLOC=$S(XPDTST=ENT:"ENTRY ACTION field (#20):",
            XPDTST=EXT:"EXIT ACTION field (#15):",1:"Entry/Exit field:")
MG1 +0      MG1(XPDMARR) ;GET MAIL GROUP DESCRIPTION
MG1 +4      . N TARR S XPDIENS=JJ_"," D GETS^DIQ(3.8,XPDIENS,"DESCRIPTION",
            "NR","TARR")
MG1 +5      . I '$D(TARR) S XPDARR("MAIL GROUP",JJ,"DESCRIPT")="No",XPDARR(
            "MAIL GROUP",JJ,"WARNING","DESCRIPTION")="MAIL GROUP "_XPDMARR(
            JJ)_"("_JJ_") - DESCRIPTION field (#3) missing."
MG1 +7      .. I '$D(TARR(3.8,XPDIENS,"DESCRIPTION")) S XPDARR("MAIL GROUP"
            ,JJ,"DESCRIPT")="No",XPDARR("MAIL GROUP",JJ,"WARNING","
            DESCRIPTION")="MAIL GROUP "_XPDMARR(JJ)_"("_JJ_") -
            DESCRIPTION field (#3) missing."
MG1 +8      .. I $D(TARR(3.8,XPDIENS,"DESCRIPTION")) S XPDARR("MAIL GROUP",
            JJ,"DESCRIPT")="Yes" N LL S LL=0 F  S LL=$O(TARR(3.8,XPDIENS,"
            DESCRIPTION",LL)) Q:'LL  S XPDARR("MAIL GROUP",JJ,"DESCRIPTION"
            ,LL)=TARR(3.8,XPDIENS,"DESCRIPTION",LL)
DIA +5      . I '$D(TARR) S XPDARR("DIALOG",JJ,"DESCRIPT")="No",XPDARR("
            DIALOG",JJ,"WARNING","DESCRIPTION")="DIALOG "_XPDIA(JJ)_"("_JJ_
            ") - TEXT field (#4) missing."
DIA +7      .. I '$D(TARR(.84,XPDIENS,"TEXT")) S XPDARR("DIALOG",JJ,"
            DESCRIPT")="No",XPDARR("DIALOG",JJ,"WARNING","DESCRIPTION")="
            DIALOG "_XPDIA(JJ)_"("_JJ_") - TEXT field (#4) missing."
DIA +8      .. I $D(TARR(.84,XPDIENS,"TEXT")) S XPDARR("DIALOG",JJ,"
            DESCRIPT")="Yes" N LL S LL=0 F  S LL=$O(TARR(.84,XPDIENS,"TEXT"
            ,LL)) Q:'LL  S XPDARR("DIALOG",JJ,"DESCRIPTION",LL)=TARR(.84,
            XPDIENS,"TEXT",LL)
SKEY +0     SKEY(XPDGC,XPDCX,XPDXN,DES) ;GENERIC COMPONENT INFO RECEIVING:
            NAME ARRAY, COMPONENT NAME, COMPONENT FILE NUMBER, DES=
            DESCRIPTION OR TEXT
SKEY +5     . I '$D(TARR) S XPDARR(XPDCX,JJ,"DESCRIPT")="No",XPDARR(XPDCX,
            JJ,"WARNING","DESCRIPTION")=DES_" missing."
SKEY +7     .. I '$D(TARR(XPDXN,XPDIENS,DES)) S XPDARR(XPDCX,JJ,"DESCRIPT")
```

```
                ="No",XPDARR(XPDCX,JJ,"WARNING","DESCRIPTION")=DES_" missing."
   SKEY +8      .. I $D(TARR(XPDXN,XPDIENS,DES)) S XPDARR(XPDCX,JJ,"DESCRIPT")=
                "Yes" N LL S LL=0 F  S LL=$O(TARR(XPDXN,XPDIENS,DES,LL)) Q:'LL
                 S XPDARR(XPDCX,JJ,"DESCRIPTION",LL)=TARR(XPDXN,XPDIENS,DES,LL)
   PDESC +6     I Y D PRNTME("DESCRIPTION")
   PRNTME +2    W @IOF
   PRNTME +5    I XPDRC=2 S XPDTYP="OPTION" W "Option Descriptions:"
   PM1 +3       . I PTRM="DESCRIPTION",XPDARR(XPDTYP,TT,"DESCRIPT")="No" W !,
                XPDTYP_" missing." Q
   PM1 +5       . I $D(XPDARR("FILE",TT,"FIELD DESCRIPTIONS")) D
   PM1 +6       .. N UU,PP S (PP,UU)=0 F  S UU=$O(XPDARR(XPDTYP,TT,UU)) Q:'UU
                F  S PP=$O(XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)) Q:'PP  W !,
                XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)
   MMT +7       .. N QQ S QQ=0 F  S QQ=$O(XPDARR(XPDTYP,TT,"DESCRIPTION",QQ))
                Q:'QQ  S XCNT=XCNT+1,XPDMM(XCNT)=XPDARR(XPDTYP,TT,"DESCRIPTION"
                ,QQ)
   MMT +11      .. I $D(XPDARR("FILE",TT,"FIELD DESCRIPTIONS")) D
   MMT +12      ... N UU,PP S (PP,UU)=0 F  S UU=$O(XPDARR(XPDTYP,TT,UU)) Q:'UU
                 F  S PP=$O(XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)) Q:'PP  S
                XCNT=XCNT+1,XPDMM(XCNT)=XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)

 U= ..............................................................................
   PM1 +6       .. N UU,PP S (PP,UU)=0 F  S UU=$O(XPDARR(XPDTYP,TT,UU)) Q:'UU
                F  S PP=$O(XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)) Q:'PP  W !,
                XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)
   MMT +9       ... N UU,PP,YY S (UU,PP)=" ",YY=-1 F  S UU=$O(XPDARR("FILE",TT,
                "FIELD",UU)) Q:UU']""  S XCNT=XCNT+1,XPDMM(XCNT)="" D
   MMT +12      ... N UU,PP S (PP,UU)=0 F  S UU=$O(XPDARR(XPDTYP,TT,UU)) Q:'UU
                 F  S PP=$O(XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)) Q:'PP  S
                XCNT=XCNT+1,XPDMM(XCNT)=XPDARR(XPDTYP,TT,UU,"DESCRIPTION",PP)

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XPDANLYZ4

 IO ..............................................................................
   FSEQ +3      D FILE^DID(FXX,"","NAME;GLOBAL NAME;DESCRIPTION;DISTRIBUTION
                PACKAGE","XPDFARR")
   FSEQ +13     N XT S XT=$O(XPDFARR("DESCRIPTION"," "),-1) S:'$G(XT) XT=0
   FSEQ +14     N JJ S JJ=0 F  S JJ=$O(XPDFARR("DESCRIPTION",JJ)) Q:'JJ  S
                XPDARR("FILE",FXX,"DESCRIPTION",JJ)=XPDFARR("DESCRIPTION",JJ)
   FSEQ +15     I XT=0 S XPDARR("FILE",FXX,"WARNING","DESCRIPTION")="File
                DESCRIPTION missing.",XPDARR("FILE",FXX,"DESCRIPT")="No"
   FSEQ +16     S:XT=1 XPDARR("FILE",FXX,"WARNING","DESCRIPTION")="File has
                minimal File description."
   FSEQ +18     I $G(XPDFARR("DISTRIBUTION PACKAGE"))]"" S XPDARR("FILE",FXX,"
                PKG")=XPDFARR("DISTRIBUTION PACKAGE")
   FSEQ +19     I $G(XPDFARR("DISTRIBUTION PACKAGE"))']"" S XPDARR("FILE",FXX,"
                WARNING","PACKAGE")="DISTRIBUTION PACKAGE is not defined for
                this file."
   FSEQ +24     . N XPFF1 D FIELD^DID(FXX,FLD1,"","LABEL;HELP-PROMPT;
                DESCRIPTION","XPFF1") Q:'$D(XPFF1)
   FSEQ +27     . I '$D(XPFF1("DESCRIPTION")) S XPDARR("FILE",FXX,"FIELD",FNN,"
                DESCRIPTION",0)=" Description missing."
   FSEQ +28     . I $D(XPFF1("DESCRIPTION")) S XPDARR("FILE",FXX,"FIELD",FNN,"
                DESCRIPTION",0)=" Description:" D
   FSEQ +29     .. N JJ S JJ=0 F  S JJ=$O(XPFF1("DESCRIPTION",JJ)) Q:'JJ  S
                XPDARR("FILE",FXX,"FIELD",FNN,"DESCRIPTION",JJ)=$J(" ",5)_
                XPFF1("DESCRIPTION",JJ)
```

```
   FSEQ +40      .. D FIELD^DID(XPDSUB,FLDNUM,"","LABEL;HELP-PROMPT;DESCRIPTION;
                 EXECUTABLE HELP","FLDARR") Q:'$D(FLDARR)
   FSEQ +45      .. S:FLDARR("DESCRIPTION")']"" XPDARR("FILE",FXX,FLDNUM,"
                 WARNING","DESCRIPTION")=FNAME_" (#"_FLDNUM_") - Field
                 Description missing.",XPDARR("FILE",FXX,"FIELD",FNAME,"
                 DESCRIPTION",0)=" Description missing."
   FSEQ +50      .. I FLDARR("DESCRIPTION")]"" S XPDARR("FILE",FXX,"FIELD",
                 FNAME,"DESCRIPTION",0)=" Field Description:" D
   FSEQ +51      ... N JJ S JJ=0 F  S JJ=$O(FLDARR("DESCRIPTION",JJ)) Q:'JJ  S
                 XPDARR("FILE",FXX,"FIELD",FNAME,"DESCRIPTION",JJ)=$J(" ",5)_
                 FLDARR("DESCRIPTION",JJ)
   FSEQ +52      .. I FLDARR("HELP-PROMPT")]"",FLDARR("DESCRIPTION")]"" D
   FSEQ +54      ... N KK S KK=0 F  S KK=$O(FLDARR("DESCRIPTION",KK)) Q:'KK  S
                 SDES=SDES_" "_FLDARR("DESCRIPTION",KK)
   TA +4         K FLDARR D FIELD^DID(FXX1,FLDNUM,"","*","FLDARR")  ;D FIELD^
                 DID(FXX,FLDNUM,"","LABEL;HELP-PROMPT;DESCRIPTION","FLDARR")
   TA +10        S:FLDARR("DESCRIPTION")']"" XPDARR("FILE",FXX,FLDNUM,"WARNING",
                 "DESCRIPTION")=FNN_" - Field Description missing.",XPDARR("
                 FILE",FXX,"DESCRIPT")="No",XPDARR("FILE",FXX,"FIELD-WARNING")="
                 "
   TA +11        I FLDARR("HELP-PROMPT")]"",FLDARR("DESCRIPTION")]"" D
   TA +13        . N KK S KK=0 F  S KK=$O(FLDARR("DESCRIPTION",KK)) Q:'KK  S
                 SDES=SDES_" "_FLDARR("DESCRIPTION",KK)
   TA +16        I FLDARR("DESCRIPTION")]"" D
   TA +18        . S XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",.1)=""
   TA +20        . S XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",.5)=XTXT_FLDNUM_": "
                 _FLDARR("LABEL"),XPDARR("FILE",FXX,"DESCRIPT")="Yes"
   TA +21        . N JJ S JJ=0 F  S JJ=$O(FLDARR("DESCRIPTION",JJ)) Q:'JJ  S
                 XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",JJ)=FLDARR("DESCRIPTION"
                 ,JJ)
   TA +23        N XXP S XXP=$O(XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",999),-1)
                 I '$G(XXP) S XXP=0
   TA +24        I FLDARR("HELP-PROMPT")']"" S XXP=XXP+1,XPDARR("FILE",FXX,
                 FLDNUM,"DESCRIPTION",XXP)="HELP-PROMPT: missing."
   TA +26        . S XXP=XXP+1,XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",XXP)="
                 HELP-PROMPT:",XXP=XXP+1,XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",
                 XXP)=FLDARR("HELP-PROMPT")
   TA +27        I XXP>0 S XPDARR("FILE",FXX,"FIELD DESCRIPTIONS")=""
   TA +28        I FLDARR("TECHNICAL DESCRIPTION")]"" D
   TA +29        . S XXP=XXP+1,XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",XXP)="
                 TECHNICAL DESCRIPTION:" D
   TA +30        .. N JJ S JJ=0 S JJ=$O(FLDARR("DESCRIPTION",JJ)) Q:'JJ  S XXP=
                 XXP+JJ,XPDARR("FILE",FXX,FLDNUM,"DESCRIPTION",XXP)=FLDARR("
                 TECHNICAL DESCRIPTION",JJ)

                                <><><>

XPDANLYZ5

 $I ..........................................................................
   MSQA +0       MSQA(XLINE,SQAT) ;IO, %, $I
   MSQA +19      . I SQAT="$I" N SP1 S SP1=(POS-SL) I ($E(XLINE,SP1,(SL+1))="$$"
                 )!($E(XLINE,POS)?1A) S XT=1 Q

 % ..........................................................................
   FILEME +7     D OPEN^%ZISH("XPBA",XPPATH,XPFNAME,"W")
   FILEME +14    D CLOSE^%ZISH("XPBA")
   FSHOW +1      N XPPATH,XPDEL,J,END S XPPATH=$$PWD^%ZISH(),END=0
   FSHOW +10     S Y=$$LIST^%ZISH("","FILESPEC","XPFILE")
```

```
  FSHOW +18     . S J=$$DEL^%ZISH("",$NA(XPDEL))
  FSHOW +26     I $D(DARR) N J S J=$$DEL^%ZISH(XPPATH,$NA(DARR))
  MSQA +0       MSQA(XLINE,SQAT) ;IO, %, $I
  MSQA +5       . I SQAT="%" D  Q:XT  Q:END
  MSQA +6       .. I $E(XLINE,POS)?1P,$E(XLINE,(POS-SL))?1P S XT=1 Q  ;IF ITEM
                SURRONDED BY PUNCTUATION (like "%"), SKIP IT
  MSQA +7       .. I $E(XLINE,POS)'?1U I $E(XLINE,(POS-SL))="=" S XT=1 Q  ;Q
                IF SOMETHING = %
  MSQA +8       .. I $E(XLINE,POS)="=",$E(XLINE,-SL)?1P S XT=1 Q  ;%= ALLOWED
  MSQA +10      .. N PCT S PCT="" F AA=POS:1:$L(XLINE) Q:$E(XLINE,AA)'?1U  S
                PCT=PCT_$E(XLINE,AA) ;GETS THE LETERS AFTER THE % LIKE %ZIS
  MSQA +12      ... I PCT="%ZIS" S XT=1 Q

DIC(0) ..........................................................................
  MSQA +20      . I SQAT="DIC(0)" D
  MSQA +28      ... N DO1,D1 S D1="",DO1=$F(XLINE,"DIC(0)=") F AA=DO1:1:$L(
                XLINE) Q:($E(XLINE,AA)=$C(32))!($E(XLINE,AA)=",")  S D1=D1_$E(
                XLINE,AA)

IO ..............................................................................
  FILEME +10    U IO
  FSHOW +2      W @IOF S DIR(0)="F",DIR("A",1)="Set the path to find the .TXT
                files",DIR("A",2)="or accept the standard default."
  FSHOW +12     I $G(L)<1 W @IOF,"There are no Build Analyzer files to delete."
                ,!!  Q
  MSQA +0       MSQA(XLINE,SQAT) ;IO, %, $I
  MSQA +6       .. I $E(XLINE,POS)?1P,$E(XLINE,(POS-SL))?1P S XT=1 Q  ;IF ITEM
                SURRONDED BY PUNCTUATION (like "%"), SKIP IT
  MSQA +15      . I SQAT="IO" D

K ^ .............................................................................
  TMP +9        . I XLINE["K ^TMP("_FMTY_")" D

^( ..............................................................................
  K1 +7         .. I XPCON["^(" S END=1 Q

^TMP ............................................................................
  SQAMM +7      . S MR1=MR1+2,MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)=
                "",MCNT=MCNT+1,XPMM(MCNT)="These ^TMP calls have kill
                statements within the included routines:" D
  SQAMM +13     .. S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="",MCNT=
                MCNT+1,XPMM(MCNT)="These ^TMP calls have no associated kill in
                this build's included routines:"
  SQAMM +15     . I '$D(XPDTRR) S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(
                MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="All ^TMP calls have at least
                one kill statement in this build's routines."
  TMP +2        N FMTY,NSP,NSPT,PX,TLINE,T9,FTWP,EXT S PX=$L(XLINE,"^TMP(") F
                I=2:1:PX D  Q:EXT
  TMP +5        . S FMTY=$P($P(XLINE,"^TMP(",I),")"),NSP=$$TRIM^XLFSTR($P(FMTY,
                ","),"LR",$C(34)),NSPT=T9_"^TMP("_FMTY_")"
  TMP +9        . I XLINE["K ^TMP("_FMTY_")" D
  TMP +10       .. S FTWP="^TMP("_NSP_","_TWOP  S:$D(XPTK(FTWP)) XPTK(FTWP)=
                XPTK(FTWP)_"^"_ROU_" "_TAGME S:'$D(XPTK(FTWP)) XPTK(FTWP)=ROU_"
                 "_TAGME
  K1 +8         .. I (XPCON["^TMP")!(XPCON["^UTILITY") S END=1 Q

^UTILITY ........................................................................
  K1 +8         .. I (XPCON["^TMP")!(XPCON["^UTILITY") S END=1 Q
```

```
 ^XTMP ..........................................................................
   SQAMM +19    . S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="",MCNT=
                MCNT+1,XPMM(MCNT)="General ^XTMP Notes"
   SQAMM +20    . S MCNT=MCNT+1,XPMM(MCNT)="These ^XTMP calls have zero nodes
                defined in this build's included routines:"
   SQAMM +25    I XRRR]"" S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="
                These ^XTMP calls have no zero nodes defined in this build's
                included routines" D
   SQAMM +26    . N LLL F LLL=2:1:$L(XRRR,"^") S MCNT=MCNT+1,XPMM(MCNT)=$J(" ",
                5)_"Routine: "_XPDXRR($P(XRRR,"^",LLL))_$J(" ",5)_"^XTMP("_$P(
                XRRR,"^",LLL)
   SQAMM +27    I XRRR']"" S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="
                ALL ^XTMP calls have zero nodes defined in this build's
                routines"
   TMPX +1      N NSP,PX,EXT S EXT=0,PX=$L(XLINE,"^XTMP(") F I=2:1:PX D
   TMPX +2      . S NSP=$P($P($P(XLINE,"^XTMP(",I),")"),",") I NSP]"" S XPDXRR(
                NSP)=ROU I $$NSPACE^XPDANLYZ6($$TRIM^XLFSTR(NSP,"LR",$C(34)))
                S TCHK=1
   TMPX +3      N ZN,JJ,POS,QNUM S JJ=1,ZN="" I XLINE?.E1"S ".E1"^XTMP(".E1",0)
                =".E1(1"^",1"_U_").E D

                                <><><>

XPDANLYZ6

 % ..............................................................................
   BUILDME +3   S XPPATH=$$PWD^%ZISH()

 DIC(0) .........................................................................
   BUILDME +6   N DIRUT,DIC S DIC=9.6,DIC(0)="QEAM",DIC("A")="Select Build
                Name: "

 IO .............................................................................
   BUILDME +4   W @IOF,!,"This tool is used to analyze and list the components
                of a build to identify",!,"adherence to standards and best
                practices.",!! ;p732
   TX1 +18      N TARR D GINFO("9.6",XPDIENS,"3","TARR") ;GET DESCRIPTION
                ARRAY
   TX1 +19      I '$D(TARR(9.6,XPDIENS,3)) S XPDARR("BUILD",XPDBIEN,"DESCRIPT")
                ="No",XPDARR("BUILD",XPDBIEN,"WARNING","DESCRIPTION")="BUILD "_
                $P(XPDTOP,"^",2)_"("_XPDBIEN_") - DESCRIPTION field (#3)
                missing."
   TX1 +21      . S XPDARR("BUILD",XPDBIEN,"DESCRIPT")="Yes" N LL S LL=0 F  S
                LL=$O(TARR(9.6,XPDIENS,3,LL)) Q:'LL  S XPDARR("BUILD",XPDBIEN,"
                DESCRIPTION",LL)=TARR(9.6,XPDIENS,3,LL)
   BTXT +36     . I XPOPT(LKJ,EE1,ROU6)["file:" S XPDARR("OPTION",LKJ,"WARNING"
                ,TMK_ROU6)=XPOPT(LKJ,EE1,ROU6) Q
   BTXT +37     . I XPOPT(LKJ,EE1,ROU6)["global" S XPDARR("OPTION",LKJ,"
                WARNING",TMK_ROU6)=XPOPT(LKJ,EE1,ROU6) Q
   BTXT +44     . I INCL,NSP S XPDARR("OPTION",LKJ,"WARNING",TMK_ROU6)=T1_"
                Calls routine "_ROU6_" not in build or namespace." Q
   BTXT +45     . I 'INCL,NSP S XPDARR("OPTION",LKJ,"WARNING",TMK_ROU6)=T1_"
                Calls routine "_ROU6_" not in patch namespace." Q
   BTXT +46     . I INCL,'NSP S XPDARR("OPTION",LKJ,"WARNING",TMK_ROU6)=T1_"
                Calls routine "_ROU6_" not in build." Q
   BTXT +49     . N LKJ S LKJ=0 F  S LKJ=$O(XPDARR("OPTION",LKJ)) Q:'LKJ  I $D(
                XPDARR("OPTION",LKJ,"WARNING",FN1)) K XPDARR("OPTION",LKJ,"
                WARNING",FN1)
```

```
**  Analysis Complete  **
```

Figure 35: Sample Output—KIDS Build Analyzer Option with SQA Option: XU*8.0*782 Build

```
XU*8.0*782 BUILD OVERVIEW                                  May 25, 2023@14:15:50
------------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Not Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Not Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included

Package File link: KERNEL
------------------------------------------------------------------------------


*** Detailed results for components included in build XU*8.0*782  ***
------------------------------------------------------------------------------
OPTION:

   XPD UTILITY
     No issues noted.

   XPDANLYZ
     No issues noted.

   XPDANLYZ_DEL
     No issues noted.

   XPDANLYZ_SQA
     No issues noted.

   XPDANLYZ MAIN MENU
     * PACKAGE field (#12) missing.
------------------------------------------------------------------------------

ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
```

```
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run.

Routine information:

 XPDANLYZ1 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ2 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ3 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ4 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ5 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>

 XPDANLYZ6 ;OAK/RSF- BUILD ANALYZER ;10/28/22
  ;;8.0;KERNEL;**782**;Jul 10, 1995;Build 4
  ;;Per VHA Directive 2004-038, this routine should not be modified.

     * Date ^XINDEX last run was not found.

                            <><><>


================================================================================

 This build may include references to components (i.e. Routines,
 Globals, etc.) outside the build namespace. Review and validate
 that all appropriate Integration Control Registrations (ICRs)
```

```
 exist for each external reference.

================================================================================


These ^TMP calls have kill statements within the included routines:

^TMP(XPDEM,$J
          XPDANLYZ2 FMSG +2

^TMP(_FMTY_,0
          XPDANLYZ5 TMP +9


These ^TMP calls have no associated kill in this build's included routines:
  XPDANLYZ5 TMP +10      ^TMP("_NSP_","_TWOP  S:$D(XPTK(FTWP)


General ^XTMP Notes
These ^XTMP calls have zero nodes defined in this build's included routines:
     Routine: XPDANLYZ5     ^XTMP(".E1",0)=".E1(1"^",1"_U_").E D

These ^XTMP calls have no zero nodes defined in this build's included routines
     Routine: XPDANLYZ5     ^XTMP("
     Routine: XPDANLYZ5     ^XTMP("_$P(XRRR

XPDANLYZ1

 % ..........................................................................
   START +3     N X,XPDATE,XPDLINE,XPDBN,%,%H,%I D NOW^%DTC S XPDATE=X,XPDIS=1

 IO .........................................................................
   PME +1       I XPDIS=1 S END=0 N POP,IO,IOP,%ZIS,ZTIO  D  G:POP X1
   PME +13      . I $D(IO("Q")) K IO("Q") S END=1 Q

                                <><><>

XPDANLYZ2

 $I .........................................................................
   SQA +7       S XPDARRR("$I",RR,0)=""
   RLINES +35   ... I (XPD1="$I"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^
                XPDANLYZ5(RTN(K,0),XPD1) Q:'TCHK

 //// .........................................................................
   SQA +1       S XPDARRR("////",RR,0)=""

 DIC(0) .....................................................................
   SQA +2       S XPDARRR("DIC(0)",RR,0)=""
   RLINES +36   ... I (XPD1="DIC(0)"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$MSQA^
                XPDANLYZ5(RTN(K,0),XPD1) Q:'TCHK

 IO .........................................................................
   SQA +13      S XPDARRR("IO",RR,0)=""

 K @ ........................................................................
   SQA +11      S XPDARRR("K @",RR,0)=""

 K ^ ........................................................................
```

```
  SQA +9       S XPDARRR("K ^",RR,0)=""
  RLINES +32   ... I (XPD1="K ^"),'XPDIS2,RTN(K,0)[XPD1 S TCHK=$$KCHK^
               XPDANLYZ5(RTN(K,0),XPD1) Q:TCHK'=3

^( ..............................................................................
  SQA +12      S XPDARRR("^(",RR,0)=""

^TMP ............................................................................
  RLINES +31   ... I XPD1="^TMP",'XPDIS2,RTN(K,0)[XPD1 D TMP^XPDANLYZ5(RTN(K,
               0)) I 'XPDIS2 Q:TCHK

^UTILITY ........................................................................
  SQA +3       S XPDARRR("^UTILITY",RR,0)=""

^XTMP ...........................................................................
  RLINES +30   ... I XPD1="^XTMP",RTN(K,0)[XPD1 D TMPX^XPDANLYZ5(RTN(K,0)) I '
               XPDIS2 Q:TCHK  ;TMPX^ZZSRABA

                                <><><>

XPDANLYZ5

 $I .............................................................................
  MSQA +0      MSQA(XLINE,SQAT) ;IO, %, $I
  MSQA +19     . I SQAT="$I" N SP1 S SP1=(POS-SL) I ($E(XLINE,SP1,(SL+1))="$$"
               )!($E(XLINE,POS)?1A) S XT=1 Q

 % ..............................................................................
  MSQA +7      .. I $E(XLINE,POS)'?1U I $E(XLINE,(POS-SL))="=" S XT=1 Q  ;Q
               IF SOMETHING = %

 DIC(0) .........................................................................
  MSQA +20     . I SQAT="DIC(0)" D

 IO .............................................................................
  MSQA +0      MSQA(XLINE,SQAT) ;IO, %, $I

 ^( .............................................................................
  K1 +7        .. I XPCON["^(" S END=1 Q

 ^TMP ............................................................................
  SQAMM +7     . S MR1=MR1+2,MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)=
               "",MCNT=MCNT+1,XPMM(MCNT)="These ^TMP calls have kill
               statements within the included routines:" D
  SQAMM +13    .. S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="",MCNT=
               MCNT+1,XPMM(MCNT)="These ^TMP calls have no associated kill in
               this build's included routines:"
  SQAMM +15    . I '$D(XPDTRR) S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(
               MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="All ^TMP calls have at least
               one kill statement in this build's routines."
  TMP +2       N FMTY,NSP,NSPT,PX,TLINE,T9,FTWP,EXT S PX=$L(XLINE,"^TMP(") F
               I=2:1:PX D  Q:EXT
  TMP +5       . S FMTY=$P($P(XLINE,"^TMP(",I),")"),NSP=$$TRIM^XLFSTR($P(FMTY,
               ","),"LR",$C(34)),NSPT=T9_"^TMP("_FMTY_")"
  K1 +8        .. I (XPCON["^TMP")!(XPCON["^UTILITY") S END=1 Q

 ^UTILITY ........................................................................
  K1 +8        .. I (XPCON["^TMP")!(XPCON["^UTILITY") S END=1 Q
```

```
 ^XTMP ..........................................................................
   SQAMM +19    . S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="",MCNT=
                MCNT+1,XPMM(MCNT)="General ^XTMP Notes"
   SQAMM +20    . S MCNT=MCNT+1,XPMM(MCNT)="These ^XTMP calls have zero nodes
                defined in this build's included routines:"
   SQAMM +25    I XRRR]"" S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="
                These ^XTMP calls have no zero nodes defined in this build's
                included routines" D
   SQAMM +26    . N LLL F LLL=2:1:$L(XRRR,"^") S MCNT=MCNT+1,XPMM(MCNT)=$J(" ",
                5)_"Routine: "_XPDXRR($P(XRRR,"^",LLL))_$J(" ",5)_"^XTMP("_$P(
                XRRR,"^",LLL)
   SQAMM +27    I XRRR']"" S MCNT=MCNT+1,XPMM(MCNT)="",MCNT=MCNT+1,XPMM(MCNT)="
                ALL ^XTMP calls have zero nodes defined in this build's
                routines"
   TMPX +1      N NSP,PX,EXT S EXT=0,PX=$L(XLINE,"^XTMP(") F I=2:1:PX D
   TMPX +2      . S NSP=$P($P($P(XLINE,"^XTMP(",I),")"),",") I NSP]"" S XPDXRR(
                NSP)=ROU I $$NSPACE^XPDANLYZ6($$TRIM^XLFSTR(NSP,"LR",$C(34)))
                S TCHK=1
   TMPX +3      N ZN,JJ,POS,QNUM S JJ=1,ZN="" I XLINE?.E1"S ".E1"^XTMP(".E1",0)
                =".E1(1"^",1"_U_").E D

**  Analysis Complete  **
```

3 Build Analysis

3.1 Build Overview

For all display formats, the VistA Build Analyzer utility first lists the build overview; identifying components included in the build, as shown in Figure 36:

Figure 36: Sample Build Overview—List of Build Components

```
Analysis of a KIDS BUILD                                          Feb 25, 2021
============================================================================

SR*3.0*200 BUILD OVERVIEW
----------------------------------------------------------------------------
APPLICATION ACTION                      Not Included
BULLETIN                                Not Included
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
FORM                                    Not Included
FUNCTION                                Not Included
HELP FRAME                              Not Included
HL LOGICAL LINK                         Not Included
HL7 APPLICATION PARAMETER               Not Included
HLO APPLICATION REGISTRY                Not Included
INPUT TEMPLATE                          Included
LIST TEMPLATE                           Not Included
MAIL GROUP                              Not Included
OPTION                                  Not Included
PARAMETER DEFINITION                    Not Included
PARAMETER TEMPLATE                      Not Included
POLICY                                  Not Included
POLICY FUNCTION                         Not Included
PRINT TEMPLATE                          Not Included
PROTOCOL                                Not Included
REMOTE PROCEDURE                        Not Included
ROUTINE                                 Included
SECURITY KEY                            Not Included
SORT TEMPLATE                           Not Included
XULM LOCK DICTIONARY                    Not Included
```

3.2 General Build Checks

If the patch is sending components that are set to **DELETE AT SITE**, the Build Analyzer lists them here (Figure 37):

Figure 37: Sample List of Patch Components that are set to DELETE AT SITE

```
The following components are listed as "DELETE AT SITE".
     Review to validate these are accurately identified.

          Component                      Name
          ========================================

          ROUTINE                         OR3CONV
          ROUTINE                         OR3CONV1
```

If the patch is *not* set to track nationally, you get the warning shown in Figure 38:

Figure 38: Sample Warning Message—Patch Not Set to Track Nationally

```
Warning:  Build not set to track package nationally;
          Please validate that is correct.
```

If a build does *not* have a PACKAGE LINE, you get the warning shown in Figure 39:

Figure 39: Sample Warning Message—Build Missing PACKAGE LINE

```
Warning:  The PACKAGE FILE LINK is missing.
          This should be defined for a national VISTA product build.
```

If patch contain an environment check routine and it is *not* set as **DELETE AT SITE**, the Build Analyzer displays the warning shown in Figure 40:

Figure 40: Sample Warning Message—Patch Contain an Environment Check Routine and it is Not Set as DELETE AT SITE

```
Warning:  ENVIRONMENT CHECK routine is NOT set to DELETE AT SITE
```

If the patch contain a POST-INSTALL routine and it is *not* set as **DELETE AT SITE**, the Build Analyzer displays the warning shown in Figure 41:

Figure 41: Sample Warning Message—Patch Contain a Post-Install Routine and it is Not Set as DELETE AT SITE

```
Warning:  POST-INSTALL routine is NOT set to DELETE AT SITE.
```

If the patch contain a PRE-INSTALL routine and it is *not* set as **DELETE AT SITE**, the Build Analyzer displays the warning shown in Figure 42:

Figure 42: Sample Warning Message—Patch Contain a Pre-Install Routine and it is Not Set as DELETE AT SITE

```
Warning:  PRE-INSTALL routine is NOT set to DELETE AT SITE.
```

3.3 Build Component Analysis

The VistA Build Analyzer utility report displays analysis of each component included in the build, as shown in Figure 43:

Figure 43: Sample Report Displaying Build Component Analysis

```
*** Detailed results for selected components of build SR*3.0*200  ***
------------------------------------------------------------------------------
FILE:
   SURGERY
     No issues noted.

   LOCAL SURGICAL SPECIALTY
     No issues noted.

INPUT TEMPLATE:

   SROMEN-OUT
     * DESCRIPTION missing.

   SROMEN-OPER
     * DESCRIPTION missing.

   SRONRPT
     * DESCRIPTION missing.

   SRONRPT1
    * DESCRIPTION missing.

   SRONRPT2
     * DESCRIPTION missing.
------------------------------------------------------------------------------
```

If routines are included in the build, the Build Analyzer prints information about the routine checks:

Figure 44: Sample List of Build Routine Checks

```
ROUTINES

Routines can be analyzed using ^XINDEX. This section displays
first two lines of routines so they can be validated.
The third line will be included if it begins with a ";"
It also lists the date ^XINDEX was last run and potential issues
that would be identified in an SQA Checklist Review.

Routine information:

 SRONIN ;BIR/MAM,ADM - NURSE INTRAOPERATIVE REPORT ;10/24/2011
  ;;3.0;Surgery;**68,50,100,129,134,153,157,175,176,182,184,200**;24 Jun 93;Build 35

   * Date ^XINDEX last run was not found.
     * The SQA Checklist identifies the following specific code
     references to check:
            %     Lines: 22, 23, 27, 37, 38
          K ^     Lines: 47, 89
           U=     Lines: 15, 21, 73, 108, 173
         ^TMP     Lines: 33, 36, 47, 89, 110
           $I     Reference not found in this routine
         ////     Reference not found in this routine
       DIC(0)     Reference not found in this routine
           ^(     Reference not found in this routine
     ^UTILITY     Reference not found in this routine
        ^XTMP     Reference not found in this routine

                            <><><>

 DGPFHLU ;ALB/RPM - PRF HL7 ORU/ACK PROCESSING ; 6/21/06 10:27am
  ;;5.3;Registration;**425,718,650,951**;Aug 13, 1993;Build 135
  ;;Per VA Directive 6402, this routine should not be modified.

     * DGPFHLU is not in the Package namespace.
     * Date of Last ^XINDEX: APR 09, 2021
     * Missing current patch number on second line.
     * The SQA Checklist identifies the following specific code
       references to check in this routine:
       -  No specific code references from the SQA Checklist were found.

                            <><><>

[display cut here]
```

If the user included descriptions of the components/routine text (to have in one place so that they can copy/paste them into a spellcheck program), the output will look like the example in Figure 45:

Figure 45: Sample Output Showing the Build Components and Routine Descriptions

```
Descriptions associated with this build:

BUILD: SR*3.0*200 (#11341)
This enhancement to the VISTA Surgery package includes a new field
ROBOTIC ASSISTANCE (Y/N) for tracking whether robotic assistance was used
when completing a surgery procedure. The new field is included on the
Operation, Operation Short Screen, and Nurse Intraoperative Report
options within the Operation Menu and is required to be entered prior to
signing the Nurse Intraoperative Report. The field is also included on
Non-Cardiac and Cardiac Risk Assessment data entry options.  This
indicator is transmitted to VASQIP for all cases. A new field, ROBOTIC
DEFAULT (#12) has been added to the LOCAL SURGICAL SPECIALTY file
(137.45).  If defined for a local specialty, the software will
automatically enter NO in the ROBOTIC ASSISTANCE (Y/N) field when
a surgery case is created for the selected specialty.

Update to transmission code to restrict date/time field 613 to 12
characters.

FILE: SURGERY (#130)

FIELD: .04: SURGERY SPECIALTY
Definition Revised (2007):
This is the surgical specialty credited for doing this operative
procedure. Many reports, including the Annual Report of Surgical
Procedures, are sorted by the surgical specialty. This field should be
entered prior to completion of this case. (If you enter '?' in the
surgical package, it will display the entire local surgical specialty
list and a copy of the national list can be found in the Operations
Manual.)
HELP-PROMPT:
Enter the assigned surgical specialty, or section, of the surgeon.

FIELD: 2006: ROBOTIC ASSISTANCE (Y/N)
This field indicates whether robotic assistance was used for any portion
of the procedure. It must be entered prior to signing the Nurse
Intraoperative Report. Enter YES if robotic assistance was used during
the procedure. Otherwise, enter NO.
HELP-PROMPT:
Enter YES if robotic assistance was used for any part of the procedure.

FILE: LOCAL SURGICAL SPECIALTY (#137.45)

FIELD: 12: ROBOTIC DEFAULT
Setting this field to NO - ROBOTICS NOT USED will cause the software
to automatically set the ROBOTIC ASSISTANCE (Y/N) field to NO when
a surgical case is created and this specialty is selected. The value of
the ROBOTIC ASSISTANCE (Y/N) for the case can still be modified for the
case later.

Leave this field blank if the specialty uses robotics for any procedures.
HELP-PROMPT:
```

```
Enter NO to automatically set the ROBOTIC ASSISTANCE (Y/N) field to NO when cases are
created for this specialty.

            INPUT TEMPLATE: SROMEN-OUT
                 * Description missing.

            INPUT TEMPLATE: SROMEN-OPER
                 * Description missing.

            INPUT TEMPLATE: SRONRPT
                 * Description missing.

            INPUT TEMPLATE: SRONRPT1
                 * Description missing.

            INPUT TEMPLATE: SRONRPT2
                      * Description missing.

================================================================================

Text in ROUTINES between quotes and/or after ;;, by line number:


DENTAR
  3: OPT
  3: VERSION
  3: VERSION
  6: VERSION
 12: Select
 12: : EXIT//
 18: Select STATION.DIVISION:
 22: ^DENTAR
 23: QUE^DENTAR
 25: Okay to release this report for transmission to Austin
 25: Nothing released
 31: Report released for transmission to Austin
 33: Stations have not been entered in the Dental Site Parameter file.
 33: You must enter a station before you can use this option
 34: JANUARY;FEBRUARY;MARCH;APRIL;MAY;JUNE;JULY;AUGUST;SEPTEMBER;OCTOBER;
     NOVEMBER;DECEMBER
 37: RELEASE SERVICE REPORTS;OPTION;DENTAR
 38: TREATMENT DATA REVIEW/RELEASE MENU;^DENTAR1
 39: CLASS I-VI ADMIN INFO (TYPE 3);ADM
 40: PERSONNEL INFO (TYPE 4);PERS
 41: APPLICATIONS AND DENTAL FEE (TYPE 5);FEE
 42: RELEASE ALL SERVICE REPORTS;ALL
 43: CHECK DUPLICATE FOR SITTINGS;^DENTDUP

[display cut here]

**  Analysis Complete  **
```

3.4 Description of Build

This section parses the build from the BUILD (#9.6) file into its included components among the list of all potential components for a build, such as Figure 46:

Figure 46: Sample List of Build Components

```
DIALOG                                  Not Included
ENTITY                                  Not Included
FILES                                   Included
```

The VistA Build Analyzer utility does the following:

- Checks if the "Track Package Nationally" is *not* set to **YES**.
- Looks for a PACKAGE LINK.
- Looks for Environmental, Pre-Install, and Post-Install routines and warns if not set to **DELETE AT SITE**.
- Checks for and lists any components designated **DELETE AT SITE** for reviewer to be able to confirm.

3.5 Individual Components

The VistA Build Analyzer utility checks component and routine names to determine if the package is in the correct namespace. It does this by potentially checking against an array of acceptable namespaces derived from the first part of the build name, and, if found, any ADDITIONAL PREFIXES (#14) Multiple field from the PACKAGE (#9.4) file. If there are excluded name spaces (#919) listed in the PACKAGE (#9.4) file, it checks the namespace of the component/routine against those as well.

This section looks for certain aspects of the included components and notes if something does *not* seem to be in order. Files and Routines are handled differently from the other components.

3.5.1 Files

For files, the VistA Build Analyzer utility display differs depending on if the build includes the full Data Dictionary (DD) or a partial DD of the file.

- **Full DD** with *new* file, it checks the following:
  - File name is in uppercase.
  - If the new file uses the ^DIC global.
  - If tracked nationally, checks if the ^DIZ global is used.
  - For a file description, notes if it is minimal or missing.

- **Full DD** with *existing* file, it checks each field and subfield for the following:
  - Name is in uppercase.
  - Description is present.
  - Help-Prompt is present. If present, it also checks if the Help-Prompt and Description are the same.

- **Partial DD** with *existing* file, it only checks the specific fields being sent for the following:
  - Name is in uppercase.
  - Description is present.
  - Help-Prompt is present. If present, it also checks if the Help-Prompt and Description are the same.

  For partial DDs, It does *not* check the attributes at the file level (e.g., file description or name), or other fields.

3.5.2 Routines

For routines included in the build, the VistA Build Analyzer utility prints out the first **two** lines of each routine allowing the user to easily confirm that they are set correctly. It includes the **third** line if it starts with a "**;**".

The Build Analyzer also checks for the following:

- Current patch number is the last patch listed on the second line of the routine (between the set of double asterisks).
- Date of the last XINDEX. The last XINDEX date is only populated if the question in Figure 47 was answered **YES** when XINDEX was performed:

Figure 47: XINDEX Question—Answering YES Adds a Date for the Last XINDEX

```
Save parameters in ROUTINE file? NO//
```

  When the user enters **YES** at this prompt, the last XINDEX date run gets stored with that Build, so the VistA Build Analyzer utility can check for this date.
- Reviews the BUILD (#9.6) file and looks for this routine to make sure all patch numbers are current on the second line.
- If the routine appears to be in the same namespace and if the routine name is uppercase.

The example in Figure 48 shows some of the routine-related issues found by the VistA Build Analyzer utility:

Figure 48: Sample Build Routine Output

```
SRZZUTL ;BIR/ADM,SBW - UTILITY ROUTINE ;10/21/2019
  ;;3.0;SURGERY RISK ASSESSMENT;;23 Sep 91

     * SRZZUTL is not in the Package namespace.
     * Missing current patch number on second line.
     * Date ^XINDEX last run was not found.
     * BUILD file also lists this routine in these patches:
          SRA*3.0*1
```

```
XUSER3    ;ISF/RWF - New Person File Utilities History ;08/11/08  14:18
          ;;8.0;KERNEL;**492,500**;Jul 10, 1995
          ;Per VHA Directive 2004-038, this routine should not be modified.
```

The Build Analyzer then checks each line of the routine for existence of questionable* code snippets; if found, it indicates the line number(s).

*These are *not* contraindicated for use, but SQA checks **how** they are used.

The following lists the code that the SQA checklist indicates to check, and what the VistA Build Analyzer utility looks for in a build:

- ////
- **DIC(0)**
- **^UTILITY**
- **^TMP**
- **^XTMP**
- **%**
- **$I**
- **U=**
- **K ^**
- **^(**
- **K:**
- **K @**
- **IO**

The VistA Build Analyzer utility shows line numbers for each of those codes.

It also checks for variations of the **KILL** statement in the search:

- Conditional **KILL (K:)**.
- **KILL** with indirection (**K @**).
- Added **KILL**: For the added **KILL** statements, the Build Analyzer checks if **KILL**s go to a caret (^) or an at-sign (**@**). For example, these would be flagged:

Figure 49: Sample Variations of KILL Statements

```
D UTIL K:SRK ^SRF("APCE",SRTN) I 'SRK D PCE
K:N'="KEY"&(N'="OPT") @(DIC_"+Y)")
```

3.5.3 Examples

Figure 50: Two Examples of Routine Output

```
SROACL1 ;BIR/MAM - CARDIAC PREOP CLINICAL DATA ; AUGUST 11, 2011
  ;;3.0;Surgery;**38,71,95,125,153,160,174,176,182,184,200**;24 Jun 93;Build 35

     * Date of Last ^XINDEX: APR 09, 2021
     * The SQA Checklist identifies the following specific code
     references to check in this routine:
          K ^     Lines: 80
     ^UTILITY     Lines: 80, 81, 82, 83, 84, 85

                 <><><>

SROACL2 ;BIR/SJA - CLINICAL DATA ; JULY 12, 2011
  ;;3.0;Surgery;**125,160,176,182,184,200**;24 Jun 93;Build 35

     * Date of Last ^XINDEX: APR 09, 2021
     * The SQA Checklist identifies the following specific code
     references to check in this routine:
      -  No specific code references from the SQA Checklist were found.
```

3.6 All Components

The following components are checked by the VistA Build Analyzer utility:

- APPLICATION ACTION (#1.61)
- BULLETIN (#3.6)
- DIALOG (#.84)
- ENTITY (#1.5)
- FORM (#.403)
- FUNCTION (#.5)
- HELP FRAME (#9.2)
- HL7 APPLICATION PARAMETER (#771)
- HLO APPLICATION REGISTRY (#779.2)
- HL LOGICAL LINK (#870)
- INPUT TEMPLATE (#.402)
- LIST TEMPLATE (#409.61)
- MAIL GROUP (#3.8)
- OPTION (#19)
- PARAMETER DEFINITION (#8989.51)
- PARAMETER TEMPLATE (#8989.52)

- POLICY (#1.6)
- POLICY FUNCTION (#1.62)
- PRINT TEMPLATE (#.4)
- PROTOCOL (#101)
- REMOTE PROCEDURE (#8994)
- ROUTINE (#9.8)
- SECURITY KEY (#19.1)
- SORT TEMPLATE (#.401)
- XULM LOCK DICTIONARY (#8993)

All component checks include:

- Validates that the Name is uppercase.
- Validates that the Name is in the same namespace.
- Validates the component has a Description.

3.7 Specific Components

Specific Components have the same checks as indicated in the "All Components" section, plus component-specific checks:

3.7.1 Options

From the OPTIONS (#19) file, the VistA Build Analyzer utility checks for the following:

- Validates that the MENU TEXT (#1) field is defined.
- Validates that the PACKAGE (#12) field is defined.
- Checks to determine whether routines referenced in the following fields are included in the build/namespace:
  - ROUTINE (#25)
  - ENTRY ACTION (#20)
  - EXIT ACTION (#15)

3.7.2 Remote Procedures

From the REMOTE PROCEDURE (#8994) file, the VistA Build Analyzer utility checks for the following:

- If the RETURN VALUE TYPE (#.04) field exists, it checks for data in the RETURN PARAMETER DESCRIPTION (#3).
- If it has input variables, it validates that a description exists for each input variable.
- Check if routine it calls is included in the build/namespace.

3.7.3 Bulletin

From the BULLETIN (#3.6) file, the VistA Build Analyzer utility checks for the following:

Validates that the MAIL GROUP (#4) field is listed.

3.7.4 Dialog

From the DIALOG (#.84) file, the VistA Build Analyzer utility checks for the following:

If it calls a routine, it checks if the ROUTINE NAME (#8,.01) field is in the build/namespace.

3.8 Issues

Issues for each component are noted in the Build Analyzer output, as shown in Figure 51:

Figure 51: Sample Output from the Build Analyzer for Each Component

```
FILE:
TRANSMISSION LAYOUTS
     * No PACKAGE identified.
     * AC cross-reference (field #4) - DESCRIPTION missing.
BULLETIN:
   LA7 ABNORMAL RESULTS RECEIVED
     * Might be incorrect name space
     * No MAIL GROUP
DIALOG:
   210
     * PACKAGE VA FILEMAN is not the build namespace.
     * ROUTINE NAME (subfield #.01) within the CALLED FROM ENTRY POINTS sub-file
        (#8) calls DIR3 not found in build.
     * ROUTINE NAME (subfield #.01) within the CALLED FROM ENTRY POINTS sub-file
        (#8) calls DIR3 not in the patch namespace.

OPTION:
   A1AX EDIT PARAMETER FILE
     * The OPTION name might be incorrectly namespaced
     * PACKAGE field (#12) missing.
     * ENTRY ACTION field (#20): Calls routine DIC not in build or namespace.
     *                           Calls routine DIE not in build or namespace.
     * ENTRY ACTION field (#20): Calls file: EXT REV REGION PARAMETER.
```

If a component passes all these checks, the Build Analyzer report displays “No issues noted”, as shown in Figure 52:

Figure 52: Sample Report Output with No Issues Found

```
ZZSRA VISN RN LIST
     No issues noted
```

3.9 SQA Check—Full Lines

You can choose to do a full SQA check when you answer **YES** at the prompt shown in Figure 53:

Figure 53: Performing a Full SQA Check—System Prompts and User Entries

```
Do you want to include a section that displays the routine lines containing
specific code references reviewed on the SQA checklist? NO// YES
```

If you answer **YES** at the prompt shown in Figure 53, SQA checklist items will be included in the screen display output, as an additional text file, or a mail message that lists the line content, by line tag, of lines with SQA checklist items. The VistA Build Analyzer utility attempts to reduce the number of these lines by removing clearly inconsequential entries; hoping to better target the response to what is concerning. This is a growing field, but currently this is what is screened out:

- If line has multiple uses of the text in question, if one is *not* excluded, the whole line is shown, not just the questionable code usage.
- **K ^**

It will show if:

- There are references, such as: **K ^SRF**, **K ^SRF(0)**, **K ^SRAFY(139.9)**, or **K ^SRAFY(139.9,0)**.
- There is an indirection **KILL**, such as: **K ^@KILLME**.

It will *not* show if:

- First piece in parentheses is *not* a number (e.g., **^SRF(SRIEN**).
- **TMP**, **UTILITY** (**K ^TMP(XXX,$J**), or **K ^UTILITY("SOMETHING")**).
- Naked reference (shows in the "^" section).

Added a conditional **KILL** check (**K:**) that shows if the first section after the conditional meets the prior requirements.

3.9.1 ^TMP

^TMP does *not* show if:

- First piece in the parenthesis is a **$J**.
- If *not* **$J**, it does *not* show if the first piece is NAMESPACED and the second piece is **$J**.

Also, at the beginning of the "SQA" section it lists the locations of **^TMP KILL** statements and **^TMP**s used that do *not* have a **KILL** in the included build routines.

These **^TMP** calls have **KILL** statements within the included routines:

Figure 54: Sample ^TMP Calls with an Associated KILL Statement

```
ZZSRAT2 PTEST +16       K ^TMP("SRATEST"),SRA
ZZSRAT2 TCAS +1         K ^TMP("SRATEST")
SRZZUTL ZDNLDED +11     K ^TMP("SRLIST",$J)
SRZZUTL DNLDED +14      S SRTOT=0 K ^TMP("SRLIST",$J)
SRZZUTL DNLDED +24      K ^TMP("SRLIST",$J)
SRZZUTL DNLDED2 +5      S SRTOT=0 K ^TMP("SRLIST",$J)
```

These **^TMP** calls have no associated **KILL** in this build's included routines:

Figure 55: Sample ^TMP Calls with No Associated KILL Statement

```
ZSROPCE NITE +4          S SRS="SURGERY DATA",SRFILE=0,^TMP("SRPXAPI",$J)=""
```

3.9.2 ^XTMP

Currently, *not* restricting **XTMP**, but it looks for any **^XTMP zero** nodes in the included routines, and in addition to the line tags, lists which ones it found and which it did *not*, such as Figure 56:

Figure 56: Sample ^XTMP Report Output

```
General ^XTMP Notes
These ^XTMP calls have zero nodes defined in this build's included routines:
     Routine: ZZSRAT2     ^XTMP("SSNINQ",$J,0)=SRNOW_"^"_SRNOW_"^SSN CHECK"

These XTMP calls have no zero nodes defined in this build's included routines
     Routine: ZZSRAT2     ^XTMP("SRPARSE"
```

3.9.3 U=

U= does *not* show a line if:

- **U="^"**.
- If part of another variable, such as SRAU=.

3.9.4 %

% does *not* show a line if:

- Variable = "**%**" or **%** (standalone **%**, with or without quotes)
- **%**=something
- **%** is part of a quote, such as "rejected by 10% rule"
- If **%XXX** is part of a **DO**, **IF**, e**X**ecute statement

- **%DT.**
- **%DTC**
- **%RCR**
- **%ZIS**
- **%ZTLOAD**
- **%ZOSF**

% shows if:

- If **%XXX** is part of a **SET**, **NEW**, or **KILL** statement.
- If *not* skipped due to the above exclusions.

3.9.5 $I

$I does *not* show a line if:

Part of longer code, such as **$$ICDX=** or **$ISD**

3.9.6 IO

IO does *not* show a line if:

- **IO*** (* = a letter), such as: "**IOF**"
- ***IO** (* = a letter), such as "**S SRIO=**"
- **U IO**
- **I IO**

IO shows if:

- **K IO**
- **S IO**
- **N IO**
- **G IO**

3.9.7 DIC(0)

DIC(0) does *not* show a line if:

- It also has a FILE^DICN call with **two KILL DO**s found on the line.
- If there is no FILE^DICN call, it checks for **DIC(0)** containing an **L** parameter. If so, it *must* have a **DLAYGO** defined.
- No FILE^DICN call and **DIC(0)** does *not* contain "**L**".

DIC(0) shows if:

- If FILE^DICN but cannot find the **K DO** statements on the same line.
- No FILE^DICN, **DIC(0)** contains an **L**, but no **DLAYGO** defined.

3.10 Text Check

3.10.1 Component Descriptions/Text

If a user chooses to show descriptions/text, they appear following the "Detailed Build Analysis" section when displayed to the screen, or in a separate email or text file. The descriptions can be reviewed, and the text copied and pasted into a spellcheck document. If displayed to the screen, it is easy to capture the information by setting it up to log the display. The display shows the component description or notes if it is missing. If a partial DD file is included, it includes, if present, the field description, help-prompt ,and Tech description for the spellcheck (Figure 57).

Figure 57: Sample Partial DD Output

```
FILE: SURGERY (#130)

FIELD: .04: SURGERY SPECIALTY
Definition Revised (2007):
This is the surgical specialty credited for doing this operative
procedure. Many reports, including the Annual Report of Surgical
Procedures, are sorted by the surgical specialty. This field should be
entered prior to completion of this case. (If you enter '?' in the
surgical package, it will display the entire local surgical specialty
list and a copy of the national list can be found in the Operations
Manual.)
HELP-PROMPT:
Enter the assigned surgical specialty, or section, of the surgeon.
```

Other examples in description section (Figure 58):

Figure 58: Sample Description Output

```
FILE: EXT REV REGION PARAMETER
No description.

MAIL GROUP: SRA OIT SUPPORT
This mailgroup receives SURGERY RISK ASSESSMENT transmission messages from
the medical centers.
```

3.10.2 M Routines

This section displays text that is presented to users in a **WRITE** statement or a **$text (“;;”)** from routines included in the build.

Text displayed meets the following requirements:

- Text between quotes or following a “**;;**” (does *not* include the second line of the routine).
- Text between quotes contains at least three consecutive letters.
- Text after “**;;**” of at least **three characters**.
- Routine line does *not* begin with a semicolon.

Text that meets these requirements is excluded if:

- If has **15** or more characters *without* a space.
- If a section has no space and letters that make up less than half of the characters.
- If no space and ends in a “**(**”.
- If the quoted text follows:
  - **DIC=**
  - **DIC(0)=**
  - **DR=**
  - **DIE=**
  - **DIC("S")=**
  - **$J,**
  - “**(**“. For example: **^XTMP(“SRAM”** would be skipped. Or, if “**,$J**” follows quoted text

The information is displayed for each routine and identifies the line number where found (Figure 59):

Figure 59: Sample Routine with Line Number Output

```
SRONIN
 14: Nurse Intraoperative Report
 15: TIU
 21: TIU
 23: PRNT^SRONIN
 26: )   Case #
 27: Printed:
 28: Pt Loc:
 44: )   Case #
 54: FOA
 54: Press <return> to continue, 'A' to access Nurse Intraoperative Report
 54: functions, or '^' to exit:
 62: Age:
 62: Vice SF 509
 68: MEDICAL RECORD       NURSE INTRAOPERATIVE REPORT - CASE #
 73: TIU
 75: * * The Nurse Intraoperative Report has been electronically signed. * *
 76: Nurse Intraoperative Report Functions:
```

Remember, if pasting into a Microsoft© (MS) Word or other word-processing application with spellcheck, be sure that the option to "Ignore words in UPPERCASE" is unchecked (Figure 60):

MS Word → File → Option → Proofing
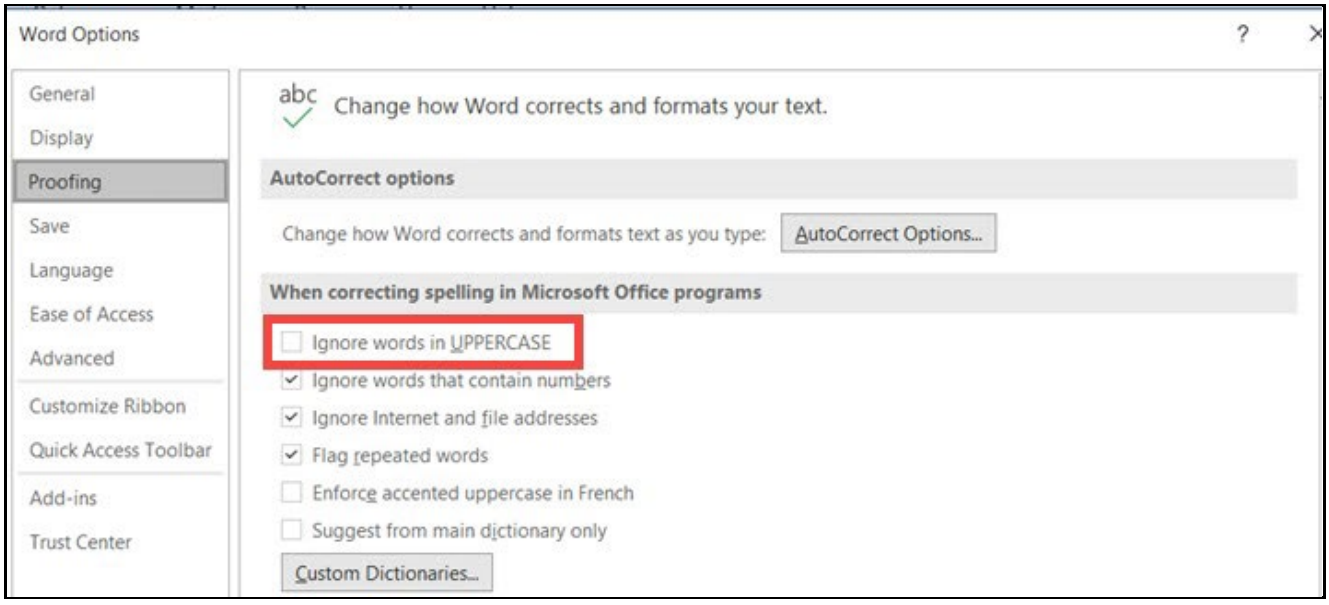
Figure 60: Setting Up Microsoft Word Proofing Checks—Ignore words in UPPERCASE