



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Laboratory

(LR)

Reference Lab Activation Guide

Version 5.2 Patch 21
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Information Technology Support Center
Division of Information Resources
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PREFACE

This document contains installation and Generic Interface System configuration directions for the IHS Reference Laboratory interface.

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1.0 Release Notes

This KIDS build contains the following items:

- All BLRL software including routines, data dictionaries and options added in support of the Reference Laboratory Interface Project.
- All BLRL and LR software added to the Reference Laboratory Interface Project
- Changes made to incorporate the Reference Laboratory Interface Project including additional prompts, DD changes to the Lab Data File (#63) and changes to reports and screen displays.

2.0 Installation Notes

2.1 General Information

This guide explains how to install and set up the Generic Interface System (GIS) for transferring data from and/or to a commercial Reference Laboratory from the Resource and Patient Management System (RPMS) using standard HL7 messaging.

Sites may use the Reference Laboratory package as a unidirectional interface, which only transfers laboratory results back to the ordering facility. Other sites may use the package as a bidirectional interface to transmit their orders electronically as well as receive results using the auto instrument option of the RPMS Laboratory Package.

Urban, Tribal, and IHS facilities using the RPMS Laboratory System may use a unidirectional interface if laboratory staff does not have time to accession and track all reference laboratory data. Sites will select to use either a unidirectional or a bidirectional interface after the software installation when site parameters are set.

A unidirectional interface passes laboratory data from the Reference Laboratory to the Patient Care Component (PCC) database, if it meets all criteria of patient and test identification. Do not interpret the laboratory data stored in the PCC as a replacement for the hard copy laboratory reports issued by the Reference Laboratory and filed in the patient charts. *The hard copy report remains the legal laboratory report.* The laboratory data transmitted to PCC via the interface is designed as a replacement for PCC data entry and provides an abstracted view of laboratory results suitable for health summary display, database searches, and clinical overview

Facilities using the RPMS Laboratory Package may use the reference laboratory interface in bidirectional mode. Test orders placed in the RPMS Laboratory System or Electronic Health Record (EHR) are exported to the designated Reference Laboratory when accessioned. Test results are released by the Reference Laboratory and may be reviewed and verified using the Enter/Verify Data (Auto Instrument) option in the Processing menu of the Laboratory Package. If a site uses a bidirectional interface, the data stored in the laboratory files duplicates the data sent by the Reference Laboratory and is available in all normal laboratory report options as well as from PCC and the Electronic Health Record (EHR).

The interface does not use commercial software or hardware, such as that supplied by Data Innovations for interfacing laboratory instruments to RPMS.

The current interface has been tested and certified for the following Reference Laboratories:

Reference Laboratory	Mode
Dynacare	Unidirectional
Laboratory Corporation of America (LabCorp)	Unidirectional and Bidirectional
Quest Diagnostics	Unidirectional and Bidirectional

Reference Laboratory	Mode
Unilab	Unidirectional
Regional Medical Laboratories (RML)	Bidirectional
Sonora Quest Laboratory	Bidirectional
Soft Computer Corporation	Unidirectional

3.0 Pre-Installation Issues

3.1 Unidirectional vs. Bidirectional

The site manager and area office information system staff in discussion with the facility laboratory staff must decide whether the interface will be set up as a unidirectional or bidirectional interface. Site parameters are set as desired following installation of Laboratory patch 21. Over time, the unidirectional interface requires less time for initial set up and for file maintenance. It is important to note that if the unidirectional interface option is chosen, reference ranges and units are passed from the reference laboratory via the interface and stored with the patient results in PCC, but laboratory data is not available to providers when they are trying to view Laboratory results via EHR. If the bidirectional interface is chosen, the laboratory staff must be current users of the RPMS Laboratory Package and must maintain units consistent with those transmitted by the Reference Laboratory in the Laboratory Test file.

3.2 Connectivity Issues

There are two potential choices for determining how electronic files are sent out to the Reference Laboratory and results are returned:

- Continuous streaming in which results and/or orders are passed back and forth in real time via TCPIP between the referring facility and the reference laboratory. This requires set up of a Virtual Private Network (VPN) connection for the exchange of files.
- FTP via a VPN in which a file or files of test results are deposited into the designated import directory on the RPMS server of the referring facility at designated time intervals. Files of laboratory orders may also be picked up by the reference laboratory from the designated export directory.

Setting up the VPN connection must be coordinated between the local facility, the Reference Laboratory, and the IHS Networking staff. Requests for LAN to LAN VPN connections must be submitted to the IHS HELP Desk several months before the anticipated implementation date. LAN to LAN VPN connections currently exist for Laboratory Corporation of America (LabCorp), Quest Diagnostics, Sonora Quest Laboratories (Quest), and Regional Medical Laboratories. A request for a facility to be added to an existing VPN must be submitted to the IHS HELP Desk through each Area's VPN Coordinator.

When submitting the VPN form to the Reference Laboratory, note that the VPN Coordinator must state that this is a LAN-to-LAN connection. The IP address of the RPMS server which is to be added to the Reference Laboratory VPN must be identified. The Reference Laboratory must include the IP address of the VPN box on

their side of the network, as well as the name and contact number for the Reference Laboratory network VPN specialist.

The type of encryption, port assignments etc., can be worked out between the Reference Laboratory network person and IHS Network staff after the form is approved. The only way to do a LAN-to-LAN connection is to have two network people exchange technical information as well as the pre-shared encrypted key.

3.3 Reference Laboratory Information

To implement the interface, contact your reference laboratory sales representative. They will need to:

- Submit a project request plan to their national office and in some cases, develop a contract identifying the services that will or not be provided.
- Provide you with a list of your test utilization for the last year.
- Provide you with a list of order and result codes for the tests that you routinely order from that reference laboratory.

Note: It is essential that you have a test and result code database from the Reference Laboratory in order to complete this mapping. The Reference Laboratory should provide a spreadsheet or other table similar to below:

Order #	Order Name	Result #	Result Name
000455	THYROID PANEL	001149	Thyroxine (T4)
000455	THYROID PANEL	001156	T3 Uptake
000455	THYROID PANEL	001164	Free Thyroxine Index
000703	RENIN ACTIVITY AND ALDOSTERONE	002006	Renin, Plasma
000703	RENIN ACTIVITY AND ALDOSTERONE	004374	Aldosterone, Serum
000810	VITAMIN B12 AND FOLATE	001503	Vitamin B12
000810	VITAMIN B12 AND FOLATE	002014	Folates (Folic Acid), Serum

Once reference laboratory resources have been assigned to implement the interface, the project manager will:

- Identify TCPIP addresses and ports that will be used for configuring GIS for the interface.
- Provide you with the settings for the HL7 message structure.
- Provide you with an electronic interface account number(s).

4.0 LR Patch Installation Instructions

4.1 Contents of Distribution

This distribution contains:

Contents of Distribution	
lr_0520.21k	KIDS file
lr_0520.21n	Notes file
lr_0520.21o.pdf	Activation guide

4.2 Requirements

- Kernel Version 8.0 through patch 8
- FileMan Version 22 through patch 1
- Laboratory Package Version 5.2 through patch 20
- GIS Version 3.01 patch 14

Note: Not all sequential GIS patches are required as each patch provides the software for a specific type of interface.

This is a standard KIDS install and should be installed by an individual with programmer access.

Access the KIDS menu by typing, **D ^XUP**, and selecting Kernel Installation & Distribution System.

```
Select Kernel Installation & Distribution System Option: Installation
```

```

1      Load a Distribution
2      Verify Checksums in Transport Global
3      Print Transport Global
4      Compare Transport Global to Current System
5      Backup a Transport Global
6      Install Package(s)
      Restart Install of Package(s)
      Unload a Distribution
```

```
Select Installation Option: 1 Load a Distribution
Enter a Host File: /usr/spool/uucppublic/lr__0520.21t1k
```

```
KIDS Distribution saved on Nov 03, 2005@09:49:49
Comment: IHS LAB Patch 1021 -- Reference Lab
```

```
This Distribution contains Transport Globals for the following Package(s):
LR*5.2*1021
Distribution OK!
```

```
Want to Continue with Load? YES//
Loading Distribution...

Build LR*5.2*1021 has an Environmental Check Routine
Want to RUN the Environment Check Routine? YES//
  LR*5.2*1021
Will first run the Environment Check Routine, BLRPRE21

Beginning of Pre Check.

Hello, TEST INSTALLER

Checking Environment for Patch **1021** of Version 5.2 of LR.

Need at least FileMan 22.0
  FileMan 22.0 found. OK.

Need at least Kernel 8.0.
  Kernel 8.0 found. OK.

Must have 'LMI' mail group present.
  'LMI' mail group found. OK.

Must have Order Entry/Results Reporting.
  Order Entry/Results Reporting found. OK.

Need at least PIMS 5.3.
  PIMS 5.3 found. OK.

Need at least LEXICON 2.0.
  LEXICON 2.0 found. OK.

Need at least GIS 3.01.
  GIS 3.01 found. OK.
  GIS 3.01 Patch 11 found. OK.
  GIS 3.01 Patch 13 found. OK.

Need Lab Patch LR*5.2*1020 installed.
  Lab Patch 1020 installed & Status complete. OK.

ENVIRONMENT OK.

BACKUPS Check Next.

Has a SUCCESSFUL system backup been performed??? NO// YES

BACKUPS CONFIRMED BY INSTALLER,TEST ON NOV 20,2005 AT 11:57

Use INSTALL NAME: LR*5.2*1021 to install this Distribution.

Select Kernel Installation & Distribution System Option: INSTallation
```

- 1 Load a Distribution
- 2 Verify Checksums in Transport Global
- 3 Print Transport Global
- 4 Compare Transport Global to Current System
- 5 Backup a Transport Global
- 6 Install Package(s)
Restart Install of Package(s)
Unload a Distribution

```
Select Installation Option: 6 Install Package(s)
Select INSTALL NAME: LR*5.2*1021      Loaded from Distribution      Loaded
from
Distribution 11/20/05@11:57:13
=> IHS LAB Patch 1021 -- Reference Lab ;Created on Nov 03,
2005@09:49:49
```

```
This Distribution was loaded on Nov 20, 2005@11:57:13 with header of
IHS LAB Patch 1021 -- Reference Lab ;Created on Nov 03, 2005@09:49:49
It consisted of the following Install(s):
LR*5.2*1021
Checking Install for Package LR*5.2*1021
Will first run the Environment Check Routine, BLRPRE21
```

Beginning of Pre Check.

Hello, TEST INSTALLER

Checking Environment for Patch **1021** of Version 5.2 of LR.

Need at least FileMan 22.0
FileMan 22.0 found. OK.

Need at least Kernel 8.0.
Kernel 8.0 found. OK.

Must have 'LMI' mail group present.
'LMI' mail group found. OK.

Must have Order Entry/Results Reporting.
Order Entry/Results Reporting found. OK.

Need at least PIMS 5.3.
PIMS 5.3 found. OK.

Need at least LEXICON 2.0.
LEXICON 2.0 found. OK.

Need at least GIS 3.01.
GIS 3.01 found. OK.
GIS 3.01 Patch 11 found. OK.
GIS 3.01 Patch 13 found. OK.

Need Lab Patch LR*5.2*1020 installed.
Lab Patch 1020 installed & Status complete. OK.


```
Installing PROTOCOL
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.

  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.

Installing LIST TEMPLATE

Installing OPTION
      Nov 20, 2005@11:59:28

Running Post-Install Routine: POSTCHK^BLRPRE21

Beginning Lab Patch 1021 POST INSTALL.

Adding BLRREFLABMENU to BLRMENU.
      BLRREFLABMENU added to BLRMENU. OK.

      ***---->>> NOTICE <<<----***

Use the Reference Lab Site Parameter Add/Edit menu to Set Up Ref Lab.

End of Lab Patch 1021 POST INSTALL.

Updating Routine file...

Updating KIDS files...

LR*5.2*1021 Installed.
      Nov 20, 2005@11:59:29

Install Completed
```

Figure 4-1: Sample of Patch Installation

5.0 Initial Setup

5.1 BLR Master Control File

Identify each facility on the RPMS database that will be using the interface by making an entry in the BLR MASTER CONTROL file. Use FileMan as follows to make the appropriate entries. Current RPMS Laboratory Package users will not need to change the START PROCESSING DATE, START EVENT DATE, or DAYS TO KEEP TRANSACTION fields.

```
Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: V LAB// BLR MASTER CONTROL      (2 entries)
EDIT WHICH FIELD: ALL//

Select BLR MASTER CONTROL SITE: LITTLE BUILDING HOSPITAL      ALBUQUERQUE
JICARILLA          10          IHS
...OK? Yes//      (Yes)

SITE: LITTLE BUILDING HOSPITAL//
LAB LOG TRANSACTION: YES
LAB LOG TO PCC: YES
LOG PAT DATA ONLY: YES
*DEFAULT DIRECTORY PATH:
START PROCESSING DATE: NOV 26, 2003 (Date you want the interface to become
active.)
START EVENT DATE: NOV 26, 2003 (Date you want the interface to become
active.)
DAYS TO KEEP TRANSACTIONS: 180 (How many days you want the incoming reference
laboratory transactions stored in the IHS Lab Transaction Log file.)
STOP PROCESSOR:
TAKE SNAPSHOTS:
ERROR OVERFLOW LIMIT:
LOINC EXPORT DESTINATION IP:
LOINC EXPORT DEST. FOLDER:
LOINC LOCAL DESTINATION:
LOINC DAYS TO KEEP EXPORT LOG:
LOINC LOG IN ID:
LOINC LOG IN PASSWORD:
ACCESSION TEST GROUP TEMPLATE:
Select EVENT DATE:
Select PROCESSING DATE: JUN 17,2002//
PROCESSING DATE: JUN 17,2002//      (No Editing)
LAST TRANSACTION SEQ ASSIGNED: 32//      (No Editing)
LAST TRANSACTION SEQ PROCESSED: 32//
TRANSACTION LOG # ASSIGNED:
Select LAB APPLICATION PLUG-IN: LR*5.2*1021 (The installation name of the
Reference Laboratory Interface patch.)      Install Completed      Install
Completed 12/26/03@09:05:48
=> Reference Laboratory Interface ;Created on Dec 17, 2003@07:05:06
Are you adding 'LR*5.2*1021' as a new LAB APPLICATION PLUG-IN (the 1ST for
this BLR MASTER CONTROL)? No// Y
```

```

(Yes)
PLUG-IN ON/OFF?: ON ON
Select LAB APPLICATION PLUG-IN:
REFERENCE LAB: LABCORP (or QUEST, DYNACARE, RML, SONORA QUEST or UNILAB)
Select CLIENT ACCOUNT NUMBER: 4104005 (enter all account numbers for this
site)
DEVICE FOR SHIPPING MANIFEST: Name or Number of RPMS Printer for Shipping
manifests for this site. If you do not wish to print hard copy shipping
manifests during the systems acceptance testing phase of the project, leave
this field blank. A device may be entered when the interface is moved into
production.
DEFAULT ORDERING LOCATION: For unidirectional sites, the ordering location in
the Hospital Location file, file #44, that should be assigned for creating
the PCC visit.)

```

Figure 5-1: BLR Master Control File

Sites that are multidivisional or have more than one location that will be using the interface will need to be sure that each facility has an entry in the BLR Master Control file, that account number(s) are identified for that facility, and a printer has been identified for printing shipping manifests.

5.2 PCC Master Control File

Identify each facility on the RPMS database that will be using the interface by making an entry in the PCC MASTER CONTROL file for LR. Use FileMan as follows to make the appropriate entries. Those facilities that have been using the RPMS Laboratory Package will already have this entry.

```

Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: STATE// PCC MASTER CONTROL (1 entry)
EDIT WHICH FIELD: ALL//

Select PCC MASTER CONTROL SITE: CIMARRON HOSP TUCSON TUCSON 01
AZ PHS
...OK? Yes// (Yes)

SITE: CIMARRON HOSP//
TYPE OF LINK: DATE ONLY REQUIRED//
DEFAULT HEALTH SUMMARY TYPE: ADULT REGULAR//
TYPE OF VISIT: IHS//
UNCODED ICD DIAGNOSIS CODE:
UNCODED ICD PROCEDURE CODE:
ATTEMPT ANCILLARY LINKAGE:
Beginning FISCAL YEAR Month:
Select PACKAGE: LR
1 LR63 1ST TIME INSTALL LR63
2 LR LAB SERVICE LR
3 LRJOB AUTOMATED LAB INSTRUMENTS LA

```

```
CHOOSE 1-3: 2 LAB SERVICE LR
PASS DATA TO PCC ?: Y YES
PACKAGE FLAG: 0
```

Figure 5-2: PCC Master Control File

5.3 File Directories (FTP sites only)

If files will be received and/or sent to a reference laboratory in batch mode using FTP, directories must be set up on the RPMS server for storing those files. A master directory named, **REFLAB**, will need to be set up in a public directory on the RPMS server. Three subdirectories can be set up within the **REFLAB** folder – **REFLABIN**, **REFLABOUT**, and **REFLABSAVE**. These directories should be username and password protected. The username and password will need to be supplied to the reference laboratory for use in their FTP script for transferring files.

6.0 Completing Setup

The additional steps required to make the interface operational are included in detail in the User Manual. A summary is provided below.

6.1 Unidirectional sites:

1. Add a test for each incoming reference laboratory test and panel to the Laboratory Test file (#60)
2. Map each of the laboratory tests (whether orderable or resultable) used by your facility to the Order and Result code entries in the BLR Reference Laboratory file.
3. If CPT Codes are to be passed to PCC, the IHS Lab CPT Code file will need to be updated for all orderable tests from the reference laboratory.
4. When adding a new provider to the RPMS database using the AVA Edit/Add Provider option, enter the provider's UPIN into the appropriate field. The UPIN is stored in both the provider file and the new person file. When the GIS interface software is installed, the provider file will be checked for the presence of a generic provider of TECHNICIAN,LAB. An entry will be added automatically if it is not present. If UPIN numbers have not been added to the RPMS Provider file, all incoming transactions will be filed in PCC with the generic TECHNICIAN,LAB as the ordering provider.
 - a) The TECHNICIAN,LAB provider will not be a valid provider unless this provider has the PROVIDER key. Use the User Inquiry option in the User Management Menu to be sure that the TECHNICIAN,LAB has the PROVIDER key. If this provider does not have the PROVIDER key, use the menu option, Add/Edit Providers [AVA PROVIDER ADD/EDIT] to assign a provider class of LABORATORY TECHNICIAN, appropriate affiliation (IHS, 638) and code of 999.
 - b) A cross-reference must be set in order for the UPIN number to be used as a "look-up" for a provider. The AUPN cross-reference may be set by using the VA FileMan option, Utilities as indicated below:

```

VA FileMan 22.0

Select OPTION: UTILITY FUNCTIONS
Select UTILITY OPTION: CROSS-REFERENCE A FIELD OR FILE

What type of cross-reference (Traditional or New)? Traditional// <ENTER>

MODIFY WHAT FILE: NEW PERSON
Select FIELD: UPIN NUMBER

CURRENT CROSS-REFERENCE IS MUMPS 'ACXIHS08' INDEX OF FILE

```

```

      (COMMON DATA XREF)

Choose E (Edit)/D (Delete)/C (Create): CREATE
WANT TO CREATE A NEW CROSS-REFERENCE FOR THIS FIELD? No// Y (Yes)
CROSS-REFERENCE NUMBER: 2// <ENTER>
Select TYPE OF INDEXING: REGULAR// <ENTER>
WANT CROSS-REFERENCE TO BE USED FOR LOOKUP AS WELL AS FOR SORTING? Yes//
(Yes)
INDEX: G// AUPIN
...

NO-DELETION MESSAGE: <ENTER>
DESCRIPTION:
  No existing text
  Edit? NO//YES
Enter text, "Cross-Reference on UPIN for Reference Laboratory Interface."

DO YOU WANT TO CROSS-REFERENCE EXISTING DATA NOW? Y (Yes)
...EXCUSE ME, I'M WORKING AS FAST AS I CAN.....

```

Figure 6-1: The utility functions option

6.2 Bidirectional sites

1. Add a test for each incoming reference laboratory test and panel to the Laboratory Test file (#60)
2. Map each of the laboratory tests (whether orderable or resultable) used by your facility to the Order and Result code entries in the BLR Reference Laboratory file.
3. If CPT Codes are to be passed to PCC, the IHS Lab CPT Code file will need to be updated for all orderable tests from the reference laboratory.
4. When adding a new provider to the RPMS database using the AVA Edit/Add Provider option, enter the provider's UPIN into the appropriate field. The UPIN is stored in both the provider file and the new person file. When the GIS interface software is installed, the provider file will be checked for the presence of a generic provider of TECHNICIAN,LAB. An entry will be added automatically if it is not present. If UPIN numbers have not been added to the RPMS Provider file, all incoming transactions will be filed in PCC with the generic TECHNICIAN,LAB as the ordering provider.
 - a. The TECHNICIAN,LAB provider will not be a valid provider unless this provider has the PROVIDER key. Use the User Inquiry option in the User Management Menu to be sure that the TECHNICIAN,LAB has the PROVIDER key. If this provider does not have the PROVIDER key, use the menu option, Add/Edit Providers [AVA PROVIDER ADD/EDIT] to assign a provider class of LABORATORY TECHNICIAN, appropriate affiliation (IHS, 638) and code of 999.

- b. A cross-reference must be set in order for the UPIN number to be used as a “look-up” for a provider. The AUPN cross-reference may be set by using the VA FileMan option, Utilities as indicated below:

```

VA FileMan 22.0

Select OPTION: UTILITY FUNCTIONS
Select UTILITY OPTION: CROSS-REFERENCE A FIELD OR FILE

What type of cross-reference (Traditional or New)? Traditional// <ENTER>

MODIFY WHAT FILE: NEW PERSON
Select FIELD: UPIN NUMBER

CURRENT CROSS-REFERENCE IS MUMPS 'ACXIHS08' INDEX OF FILE
      (COMMON DATA XREF)

Choose E (Edit)/D (Delete)/C (Create): CREATE
WANT TO CREATE A NEW CROSS-REFERENCE FOR THIS FIELD? No// Y (Yes)
CROSS-REFERENCE NUMBER: 2// <ENTER>
Select TYPE OF INDEXING: REGULAR// <ENTER>
WANT CROSS-REFERENCE TO BE USED FOR LOOKUP AS WELL AS FOR SORTING? Yes//
(Yes)
INDEX: G// AUPIN
...

NO-DELETION MESSAGE: <ENTER>
DESCRIPTION:
  No existing text
  Edit? NO//YES
Enter text, "Cross-Reference on UPIN for Reference Laboratory Interface."

```

Figure 6-2: The utility functions option continued

5. Create entries for all orderable tests in the Load/Worklist file.
6. Create entries for all resultable tests in the Auto Instrument file. The UI test code to be used in the Auto Instrument file is the Result Code supplied by the Reference Laboratory for that test.
7. Units in the Laboratory Test file will need to be updated to match those reported by the reference laboratory. Reference ranges and abnormal flags passed from the reference laboratory may be stored with the incoming results.
8. Decide how incoming reference laboratory data will be displayed and/or printed on interim and cumulative reports.

7.0 Interface Configuration and Activation

The routines for processing incoming and outgoing laboratory data for different reference laboratories are contained in GIS Patches 13 and 14. The following instructions are provided for activating the appropriate processes for LabCorp, Quest, Unilab, Regional Medical Laboratory (RML), and Sonora Quest Laboratory unidirectional and bidirectional interfaces *after installation of Laboratory Reference Patch 21*. **You will need to know whether the reference laboratory will be using TCPIP or FTP for transferring test results.** *The TCPIP address and ports assigned by the reference laboratory for sending orders and receiving results must be known before attempting to activate the interface.* The reference laboratory may supply both test as well as production information. The steps outlined below will have to be repeated to change the settings once systems acceptance testing has been completed and the interface will be moved into production.

Note: If the Reference Laboratory Interface is already running, stop the HL IHS LAB RECEIVER and HL IHS LAB TRANSMITTER background processes by using the GIS menu option, SH1 Stop Background Process, for each processor before installation of GIS Patch 13 (or 14 for RML and Sonora Quest).

After installation of GIS Patch 13 and 14, activate the appropriate Reference Laboratory interface by performing the following configuration steps.

7.1 First Time GIS Sites (Unidirectional or Bidirectional)

If a site has never used the Generic Interface System before, the system must be set up to accept incoming acknowledgements from the reference laboratory.

1. Confirm that the system has been configured to acknowledge incoming results from the reference lab by identifying the Destination for HL IHS ACCEPT ACKNOWLEDGEMENT.

```
GIS Interface Menu
  FTM File and Table Menu
    TTE Transaction Type Enter/Edit

Select Transaction Type: HL IHS ACCEPT ACKNOWLEDGEMENT

*** Transaction Type Definition, Screen 1 of 2 ***

Name: HL IHS ACCEPT ACKNOWLEDGEMENT
In/Out: OUT                                     Active: ACTIVE
Destination: HL APPL ACK OUT
Script: Generated: HL IHS ACCEPT ACKNOWLEDGEMENT-O
Parent:
Dependency:          Retry Rate:          Max # of attempts:
```

```

Acknowledge expected from remote:      Application Ack Conditions:
Acknowledge Message:
  Format Controller---Priority:         Process time:
  Output Controller---Priority:        Process Time:
Description:
Application Process:

COMMAND:                               Press <PF1>H for help
Insert

```

Figure 7-1: First time GIS sites sample screens

2. Generate the script for the HL IHS ACCEPT ACKNOWLEDGEMENT.

```

GIS Interface Menu
  SGM   Script Generator Menu ...
  MM    Message Menu ...
  MD    Message Definition

Select HL IHS ACCEPT ACKNOWLEDGEMENT
Change the Inactive Field to: NO
Save and exit.
Answer YES when asked if you wish to recompile scripts.

```

Figure 7-2: First time GIS sites sample screens

7.2 Quest Unidirectional FTP

1. Identify the destination for Quest results.

```

GIS Interface Menu
  FTM   File and Table Menu...
  TTE   Destination Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 QUEST IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-3: Destination Entry/Edit sample screen

2. Start the Reference Laboratory Processes.

```

GIS Interface Menu
  BPM   Background Process Control Menu ...
  S1    Startup a Background Process

Select OUTPUT CONTROLLER

```

Figure 7-4: Startup a Background Process sample screen

- Run the menu option, SIT Reference Lab Site Parameter Add/Edit SIT, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.3 Quest Unidirectional TCPIP

- Activate the Lab Receiver and identify the destination.

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB RECEIVER
          *** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
  Active: ACTIVE           Priority:
  Device:
  Routine: INHVTAPR
  Destination: HL IHS LAB R01 QUEST IN
Destination Determination Code:
D QUEST^INHVIHS
  Client/Server: SERVER           Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT                      Press <PF1>H for help
Insert

```

Figure 7-5: Background Process Entry/Edit – HL IHS Lab Receiver

- Turn on Message Ack for incoming Quest results.

```

GIS Interface Menu
  FTM  File and Table Menu...
  DE   Destination Entry/Edit

Select HL IHS LAB R01 QUEST IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-6: Turn on Message ACK for Quest results

- Activate the transaction type for Quest Results and inactivate the generic transaction type.

```

GIS Interface Menu
  FTM  File and Table Menu...

```

```

TTE Transaction Type Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 QUEST IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-7: Activate the transaction type for Quest results

4. Start the Reference Laboratory Processes.

```

GIS Interface Menu
BPM Background Process Control Menu ...
      S1 Startup a Background Process

Select OUTPUT CONTROLLER
Select FORMAT CONTROLLER
Select HL IHS LAB RECEIVER

```

Figure 7-8: Startup a Background Process

5. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.4 Quest Bidirectional TCPIP

7.4.1 LA7 Message Parameter Configuration

Make an entry for the Reference Laboratory in the LA7 MESSAGE PARAMETER CONFIGURATION file (#62.48) *if using a bidirectional interface*. Use FileMan to edit the file as follows.

```

Select LA7 MESSAGE PARAMETER CONFIGURATION: QUEST
CONFIGURATION: QUEST//
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: OFF (ON when interface first turned on for troubleshooting.)
PROCESS IN: D QUE^BLRQIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: TDA43807
      Receiving Facility - TDA
      Sending Facility - 43807 (Client Account Number)
These entries will be provided by the Reference Laboratory and may be changed when testing has been completed and the interface is switched to production.

```

Figure 7-9: Message Parameter Configuration (Quest)

7.4.2 GIS Configuration

1. Activate and identify the Destination for the Lab Receiver. *Note that the TPCPIP address does not need to be entered for the receiver.*

```

GIS Interface Menu
  FTM  File and Table Menu ...
        BPE  Background Process Entry/Edit

Select HL IHS LAB RECEIVER

```

Figure 7-10: Background Process Entry/Edit

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
      Active: ACTIVE           Priority:
      Device:
      Routine: INHVTAPR
      Destination: HL IHS LAB R01 QUEST IN
Destination Determination Code:
D QUEST^INHVIHS
      Client/Server: SERVER       Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT                    Press <PF1>H for help
Insert

```

Figure 7-11: Background Process Entry/Edit – HL IHS Lab Receiver

2. Activate and identify the Destination for the Lab Transmitter.

```

GIS Interface Menu
  FTM  File and Table Menu ...
        BPE  Background Process Entry/Edit

Select HL IHS LAB TRANSMITTER
Set the Client/Server field to: CLIENT
Set the Connection type to: TRANSIENT
Enter the Client Address:  TPCPIP address provided by Quest
Enter the Client Port Number:  Port Number assigned by Quest
Save your changes and exit.

```

Figure 7-12: Background Process Entry/Edit – HL IHS Lab Transmitter

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB TRANSMITTER
      Active: ACTIVE          Priority:
      Device:
      Routine: INHVTAPT
      Destination: HL IHS LAB QUEST
Destination Determination Code:

      Client/Server: CLIENT      Connection Type: TRANSIENT
Server Ports:

Client Addresses:
199.4.216.32      When the TCPIP address is entered, a box will open
                  allowing entry of the port number that will be used
                  for sending orders.

COMMAND:      SAVE and EXIT          Press <PF1>H for help
Insert

```

Figure 7-13: Background Process Entry/Edit – HL IHS Lab Transmitter

3. Turn on Message Ack for incoming Quest results.

```

GIS Interface Menu
  FTM  File and Table Menu...
  DE   Destination Entry/Edit

Select HL IHS LAB R01 QUEST IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-14: Turn on Message ACK for Quest results

4. Activate the process for outgoing Quest orders. Save your changes.

```

GIS Interface Menu
  FTM  File and Table Menu...
  TTE  Transaction Type Entry/Edit

*** Transaction Type Definition, Screen 1 of 2 ***

Name: HL IHS LAB QUEST 001 OUT CHILD
In/Out: OUT          Active: ACTIVE
Destination: HL IHS LAB QUEST
Script: Generated: HL IHS LAB 001 QUEST-O
Parent: HL IHS 001 OUT PARENT
Dependency:          Retry Rate:          Max # of attempts:

```

```

Acknowledge expected from remote:      Application Ack Conditions:
Acknowledge Message:
  Format Controller---Priority:         Process time:
  Output Controller---Priority:        Process Time:
Description:
Application Process:

```

Figure 7-15

5. Activate the transaction type for Quest Results and inactivate the generic transaction type.

```

GIS Interface Menu
  FTM  File and Table Menu...
  TTE  Transaction Type Enter/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 QUEST IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-16: Activate the Quest results transaction type.

6. Start the Reference Laboratory Processes.

```

GIS Interface Menu
  BPM  Background Process Control Menu ...
  S1   Startup a Background Process

Select OUTPUT CONTROLLER
Select FORMAT CONTROLLER
Select HL IHS LAB RECEIVER
Select HL IHS LAB TRANSMITTER

```

Figure 7-17: Startup a Background Process

7. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.5 LabCorp Unidirectional TCPIP

1. Activate and identify the Destination for the Lab Receiver. *Note that the TCPIP address does not need to be used for the Lab Receiver.*

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB RECEIVER

```

Figure 7-18: Background Process Entry/Edit - HL IHS Lab Receiver

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
  Active: ACTIVE          Priority:
  Device:
  Routine: INHVTAPR
  Destination: HL IHS LAB R01 LABCORP IN
Destination Determination Code:
D LABCORP^INHVIHS
  Client/Server: SERVER      Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT          Press <PF1>H for help
Insert

```

Figure 7-19: Background Process Entry/Edit – HL IHS Lab Receiver

2. Turn on Message Ack for incoming results from LabCorp.

```

GIS Interface Menu
  FTM  File and Table Menu...
  DE   Destination Entry/Edit

Select HL IHS LAB R01 LABCORP IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-20: Turn on ACK for incoming LabCorp results

3. Activate the transaction type for LabCorp results and inactivate the generic transaction.

```

GIS Interface Menu
  FTM  File and Table Menu...
  TTE  Destination Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE

```

```

Save your changes and exit
Select HL IHS LAB R01 LABCORP IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-21: Activate the transaction type for LabCorp results

4. Start the Reference Laboratory Processes.

```

GIS Interface Menu
BPM Background Process Control Menu ...
S1 Startup a Background Process

Select OUTPUT CONTROLLER
Select FORMAT CONTROLLER
Select HL IHS LAB RECEIVER

```

Figure 7-22: Startup Background Process

5. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.6 LabCorp Bidirectional TCP/IP

7.6.1 LA7 Message Parameter Configuration

Make an entry for the Reference Laboratory in the LA7 MESSAGE PARAMETER CONFIGURATION file (#62.48) if using a bidirectional interface. Use FileMan to edit the file as follows.

```

Select LA7 MESSAGE PARAMETER CONFIGURATION: LABCORP
CONFIGURATION: LABCORP
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: ON
PROCESS IN: D QUE^BLRLIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: 1100DACIMITEST5158
Receiving Facility - DA
Receiving Application - 1100
Sending Facility - TEST5158
Sending Application - CIMI
These entries will be provided by the Reference Laboratory and may be changed
when testing has been completed and the interface is switched to production.

```

Figure 7-23: Message Parameter Configuration (LabCorp)

7.6.2 GIS Configuration

1. Activate and enter the Destination for the Lab Receiver. *Note that the TCP/IP address does not need to be used for the Lab Receiver.*

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB RECEIVER

```

Figure 7-24: Background Process Entry/Edit - HL IHS Lab Receiver

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
  Active: ACTIVE          Priority:
  Device:
  Routine: INHVTAPR
  Destination: HL IHS LAB R01 LABCORP IN
Destination Determination Code:
D LABCORP^INHVIHS
  Client/Server: SERVER      Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT          Press <PF1>H for help
Insert

```

Figure 7-25: Background Process Entry/Edit – HL IHS Lab Receiver

2. Activate and enter the Destination for the Lab Transmitter.

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB TRANSMITTER
Set the Client/Server field to: CLIENT
Set the Connection type to: TRANSIENT
Enter the Client Address: TCP/IP address provided by LabCorp
Enter the Client Port Number: Port Number assigned by LabCorp
Save your changes and exit.

```

Figure 7-26: Background Process Entry/Edit – HL IHS Lab Transmitter

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB TRANSMITTER
  Active: ACTIVE          Priority:
  Device:
  Routine: INHVTAPT
  Destination: HL IHS LAB LABCORP

```

```

Destination Determination Code:

      Client/Server: CLIENT           Connection Type: TRANSIENT
Server Ports:

Client Addresses:
199.4.216.32           When the TCPIP address is entered, a box will open
                           allowing entry of the port number that will be used
                           for sending orders.

COMMAND:      SAVE and EXIT           Press <PF1>H for help
Insert

```

Figure 7-27: Background Process Entry/Edit – HL IHS Lab Transmitter

3. Turn on Message Ack for incoming results from LabCorp.

```

GIS Interface Menu
      FTM   File and Table Menu...
      DE    Destination Entry/Edit

Select HL IHS LAB R01 LABCORP IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-28: Turn on ACK for incoming LabCorp results

4. Activate the transaction type for LabCorp results and inactivate the generic transaction.

```

GIS Interface Menu
      FTM   File and Table Menu...
      TTE   Transaction Type Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 LABCORP IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-29: Destination Entry/Edit for LabCorp results

5. Activate the transaction type for outgoing LabCorp orders.

```

GIS Interface Menu
      FTM   File and Table Menu...
      TTE   Destination Entry/Edit

Select HL IHS LAB LABCORP 001 OUT CHILD

```

```
Change the Active field to ACTIVE
Save your changes and exit
```

Figure 7-30: Transaction Type for LabCorp Orders

6. Start the Reference Laboratory Processes.

```
GIS Interface Menu
  BPM   Background Process Control Menu ...
        S1   Startup a Background Process

Select OUTPUT CONTROLLER
Select FORMAT CONTROLLER
Select HL IHS LAB TRANSMITTER
Select HL IHS LAB RECEIVER
```

Figure 7-31: Startup a Background Process

7. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.7 RML Bidirectional TCPIP

7.7.1 LA7 Message Parameter Configuration

Make an entry for the Reference Laboratory in the LA7 MESSAGE PARAMETER CONFIGURATION file (#62.48) *if using a bidirectional interface*. Use FileMan to edit the file as follows.

```
Select LA7 MESSAGE PARAMETER CONFIGURATION: RML
CONFIGURATION: LABCORP
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: ON
PROCESS IN: D QUE^BLRRIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: RML5508
   Receiving Facility - RML
   Sending Facility - 5508 (Client Account Number)
Entries will be provided by the Reference Laboratory and may be changed when
testing has been completed and the interface is switched to production.
```

Figure 7-32: Message Parameter Configuration (RML)

7.7.2 GIS Configuration

1. Identify the Destination for the Lab Receiver. Note that the TCPIP address does not need to be used for the Lab Receiver.

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB RECEIVER

```

Figure 7-33: Background Process Entry/Edit - HL IHS Lab Receiver

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
  Active: ACTIVE          Priority:
  Device:
  Routine: INHVTAPR
  Destination: HL IHS LAB R01 RML IN
Destination Determination Code:
D RML^INHVIHS
  Client/Server: SERVER      Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT          Press <PF1>H for help
Insert

```

Figure 7-34: Background Process Entry/Edit – HL IHS Lab Receiver

2. Identify the Destination for the Lab Transmitter.

```

GIS Interface Menu
  FTM  File and Table Menu ...
  BPE  Background Process Entry/Edit

Select HL IHS LAB TRANSMITTER
Set the Client/Server field to: CLIENT
Set the Connection type to: TRANSIENT
Enter the Client Address: TCPIP address provided by RML
Enter the Client Port Number: Port Number assigned by RML
Save your changes and exit.

```

Figure 7-35: Background Process Entry/Edit – HL IHS Lab Transmitter

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB TRANSMITTER
  Active: ACTIVE          Priority:
  Device:
  Routine: INHVTAPT
  Destination: HL IHS LAB RML

```

```

Destination Determination Code:

      Client/Server: CLIENT           Connection Type: TRANSIENT
Server Ports:

Client Addresses:
199.4.216.32           When the TCPIP address is entered, a box will open
                           allowing entry of the port number that will be used
                           for sending orders.

COMMAND:      SAVE and EXIT           Press <PF1>H for help
Insert

```

Figure 7-36: Background Process Entry/Edit – HL IHS Lab Transmitter

3. Turn on Message Ack for incoming results from RML.

```

GIS Interface Menu
      FTM   File and Table Menu...
      DE    Destination Entry/Edit

Select HL IHS LAB R01 RML IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-37: Turn on ACK for incoming RML results

4. Activate the transaction type for RML results and inactivate the generic transaction type.

```

GIS Interface Menu
      FTM   File and Table Menu...
      TTE   Transaction Type Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 RML IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-38: Activate transaction type for RML results

5. Activate the transaction type for RML orders.

```

GIS Interface Menu
      FTM   File and Table Menu...
      TTE   Destination Entry/Edit

Select HL IHS LAB RML 001 OUT CHILD
Change the Active field to ACTIVE

```

Save your changes and exit

Figure 7-39: Activate transaction type for RML orders

6. Start the Reference Laboratory Processes.

GIS Interface Menu

BPM Background Process Control Menu ...
S1 Startup a Background Process

Select **OUTPUT CONTROLLER**
 Select **FORMAT CONTROLLER**
 Select **HL IHS LAB TRANSMITTER**
 Select HL **IHS LAB RECEIVER**

Figure 7-40: Startup a Background Process

7. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.8 Sonora Quest Laboratory Bidirectional TCPIP

7.8.1 LA7 Message Parameter Configuration

Make an entry for the Reference Laboratory in the LA7 MESSAGE PARAMETER CONFIGURATION file (#62.48) *if using a bidirectional interface*. Use FileMan to edit the file as follows.

```
Select LA7 MESSAGE PARAMETER CONFIGURATION: SONORA QUEST
CONFIGURATION: LABCORP
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: ON
PROCESS IN: D QUE^BLRQIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: PHXA76965
Receiving Facility - PHX
Sending Facility - A76965 (Client Account Number)
Entries will be provided by the Reference Laboratory and may be changed when
testing has been completed and the interface is switched to production.
```

Figure 7-41: Message Parameter Configuration (Sonora Quest)

7.8.2 GIS Configuration

1. Identify the Destination for the Lab Receiver. Note that the TCPIP address does not need to be used for the Lab Receiver.

GIS Interface Menu

FTM File and Table Menu ...

```

BPE    Background Process Entry/Edit

Select HL IHS LAB RECEIVER

```

Figure 7-42: Background Process Entry/Edit - HL IHS Lab Receiver

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB RECEIVER
      Active: ACTIVE           Priority:
      Device:
      Routine: INHVTAPR
      Destination: HL IHS LAB R01 SONORA QUEST IN
Destination Determination Code:
D SQUEST^INHVIHS
      Client/Server: SERVER       Connection Type: PERSISTENT
Server Ports:
7905

Client Addresses:

COMMAND:  SAVE and EXIT                    Press <PF1>H for help
Insert

```

Figure 7-43: Background Process Entry/Edit – HL IHS Lab Receiver

2. Identify the Destination for the Lab Transmitter.

```

GIS Interface Menu
      FTM  File and Table Menu ...
      BPE  Background Process Entry/Edit

Select HL IHS LAB TRANSMITTER
Set the Client/Server field to: CLIENT
Set the Connection type to: TRANSIENT
Enter the Client Address: TCPIP address provided by Sonora Quest
Enter the Client Port Number: Port Number assigned by Sonora Quest
Save your changes and exit.

```

Figure 7-44: Background Process Entry/Edit – HL IHS Lab Transmitter

```

*** Background Process Entry/Edit ***      Screen 1 of 3

Name: HL IHS LAB TRANSMITTER
      Active: ACTIVE           Priority:
      Device:
      Routine: INHVTAPT
      Destination: HL IHS LAB SONORA QUEST
Destination Determination Code:

```

```

Client/Server: CLIENT          Connection Type: TRANSIENT
Server Ports:

Client Addresses:
199.4.216.32          When the TCPIP address is entered, a box will open
                      allowing entry of the port number that will be used
                      for sending orders.

COMMAND:      SAVE and EXIT          Press <PF1>H for help
Insert

```

Figure 7-45: Background Process Entry/Edit – HL IHS Lab Transmitter

3. Turn on Message Ack for incoming results from Sonora Quest.

```

GIS Interface Menu
  FTM  File and Table Menu...
  DE   Destination Entry/Edit

Select HL IHS LAB R01 SONORA QUEST IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes

```

Figure 7-46: Turn on ACK for incoming Sonora Quest results

4. Activate the transaction type for Sonora Quest results and inactivate the generic transaction type.

```

GIS Interface Menu
  FTM  File and Table Menu...
  TTE  Transaction Type Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 SONORA QUEST IN
Change the Active field to ACTIVE
Save your changes and exit

```

Figure 7-47: Activate transaction type for Sonora Quest results

5. Activate the transaction type for Sonora Quest orders.

```

GIS Interface Menu
  FTM  File and Table Menu...
  TTE  Transaction Type Entry/Edit

Select HL IHS LAB SONORA QUEST 001 OUT CHILD

```

```
Change the Active field to ACTIVE
Save your changes and exit
```

Figure 7-48: Destination Entry/Edit for Sonora Quest Orders

6. Start the Reference Laboratory Processes.

```
GIS Interface Menu
  BPM Background Process Control Menu ...
      S1 Startup a Background Process

Select OUTPUT CONTROLLER
Select FORMAT CONTROLLER
Select HL IHS LAB TRANSMITTER
Select HL IHS LAB RECEIVER
```

Figure 7-49: Startup a Background Process

7. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

7.9 Unilab Unidirectional FTP

1. Activate the Reference Laboratory Process.

```
GIS Interface Menu
  FTM File and Table Menu...
  TTE Transaction Type Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 UNILAB IN
Change the Active field to ACTIVE
Save your changes and exit
```

Figure 7-50: Activate transaction Type

2. Start the Reference Laboratory Process.

```
GIS Interface Menu
  BPM Background Process Control Menu ...
      S1 Startup a Background Process

Select OUTPUT CONTROLLER
```

Figure 7-51: Startup a Background Process

3. Run the menu option, SIT Reference Lab Site Parameter Add/Edit, as shown in Section 8.0, Ref Lab Site Parameter Setup.

8.0 Ref Lab Site Parameter Setup

The final step in activating a reference laboratory interface is setting up the site parameters for that interface. The settings to be used for setting the site parameters will be provided by your reference laboratory and will include the following parameters.

```
TCPIP Address -156.30.21.204
Sending Port (Orders for bidirectional interface) - 56285
Receiving Port (Results for unidirectional/bidirectional interfaces)
- 56286
Sending Application - NW98134731 (MSH 3)
Sending Facility - 98134731 (MSH 4)
Receiving Application - QUEST (MSH 5)
Receiving Facility - TSE (MSH 6)
Processing ID - T (MSH 11)
```

Figure 8-1: Reference Lab Site Parameters

Use the menu option, *SIT Reference Lab Site Parameter Add/Edit*, to enter the settings as follows. Note that this option creates entries in the file, BLR REFERENCE LABORATORY, as well as generates GIS scripts for the interface. This file may be subsequently edited to add additional accession areas for multidivisional sites or to map tests.

```
LAB      Laboratory DHCP Menu ... (locked with LRLAB)
BLR      IHS Lab Main Support Menu ... (locked with BLRZMENU)
REF      Reference Lab Main Menu ... (locked with BLRRLZ)
SIT      Reference Lab Site Parameter Add/Edit

Select Reference Lab Main Menu Option: SIT Reference Lab Site Parameter
Add/Edit
Now setting up reference lab parameters..
Setup Parameters for which Reference Lab: QUEST
EXPORT DIRECTORY: c:\reflab\reflabout\ Replace (Only needed for FTP)
SENDING MACHINE IP ADDRESS:
FTP USER ID:
FTP PASSWORD:
ORDER(S) FILE NAME PREFIX: TSE (Only needed for FTP site)
RESULT(S) FILE NAME PREFIX: TSE (Only needed for FTP site)
STORAGE DIRECTORY: c:\reflab\reflabsave\ Replace (Only needed for FTP)
IMPORT DIRECTORY: c:\reflab\reflabin\// (Only needed for FTP)
BIDIRECTIONAL/UNIDIRECTIONAL: BIDIRECTIONAL//
HOLD LABS FOR VERIFICATION: (Only used for unidirectional sites which chose
to review the incoming lab data before verifying for release to PCC.)
DAYS TO KEEP ORD/RES FILE(S): 30 (only needed for FTP)
CLIENT NUMBER: 02305092 (Enter the client account number for the "master
site" in multidivisional environments. Additional client account numbers may
be entered for other sites using this interface when editing the BLR Master
Control File.)
DEVICE FOR SHIPPING MANIFEST: (Printer that will be used to print shipping
manifests. Only used for bidirectional. If more than one facility will be
using this interface in a multidivisional mode, additional shipping manifest
```

```

printers may be identified for each facility in the BLR Master Control file.)
DEFAULT ORDERING LOCATION: (only used for unidirectional - be sure an
appropriate location is set in File 44 with the correct institution pointer
for PCC visit creation.)
PASS CPT CODES ? : (Only used for unidirectional - Do not answer "yes" unless
an on site person has been trained and is capable of maintaining the IHS Lab
CPT file for client billing purposes.)
Select ACCESSION AREA: SENDOUTS (Each accession area that will be using this
interface must be listed in this field. The BLR REFERENCE LABORATORY file
may be edited at any time to add additional accession areas that may be using
this interface. For example if the interface will be used at a multi-
divisional facility, the Sendout accession area for each facility must be
added to this field.

Now setting up GIS HL7 Message Parameters..
SENDING APPLICATION: NW98134731
SENDING FACILITY: 98134731
RECEIVING APPLICATION: QUEST
RECEIVING FACILITY: TSE
Add this Reference Lab to which Site: LITTLE BUILDING HOSPITAL
ALBUQUERQUE
           JICARILLA           10           IHS

Now setting up Lab HL7 Message Parameter File..

Now activating Reference Lab Interface..

Generation for message: HL IHS LAB 001
QUEST.....

The following scripts were generated:
    Generated: HL IHS LAB 001 QUEST-0

Compiling Script: Generated: HL IHS LAB 001 QUEST-0
MUMPS section....
DATA
section.....

END section.

Compile completed with 0 warnings and 0 errors.
Linking... Filing generated routines...

```

Figure 8-2: Reference Lab Site Parameter Add/Edit

9.0 TaskMan

The task, BLRTASK LAB LOG CLEANUP, should be tasked to run daily at a time when relatively few users are on the system. This task removes laboratory transaction log records that are older than 180 days or whatever time frame has been specified in the BLR MASTER CONTROL file for the facility. This task should already be scheduled at sites currently using the RPMS Laboratory Package. The task, INH AUTOPURGE, which deletes raw data in the Universal Interface file, ^INTHU, should be tasked to run every 14D. Two additional tasks, BLR REFLAB RESTART RECEIVER and BLR REFLAB RESTART TRANSMITTER should be scheduled to run at 1H intervals at bidirectional sites with real time VPN connections. Only BLR REF LAB RESTART RECEIVER should be scheduled to run at 1H intervals at unidirectional sites. These tasks restart the GIS receiver and transmitter on an hourly basis in the event connectivity is lost.

Summary of Tasks

Task	Unidirectional/Bidirectional	Frequency
BLRTASK LAB LOG CLEANUP	Both	Daily
INH AUTOPURGE	Both	14D
BLR REFLAB RESTART RECEIVER	Both	1H
BLR REFLAB RESTART TRANSMITTER	Bidirectional	1H

10.0 Mail Group

Bidirectional Sites

If it does not already exist, a mail group should be set up to receive bulletins notifying them of reference laboratory tests that failed to pass to PCC. The mail group should be called Lab/PCC Link. Or you may use an existing mail group like Lab Report. Members should be the site manager and the primary person(s) on site who will be managing the tests imported and/or exported from the Reference Laboratory. Identify this mail group as recipients for the bulletins:

- BLRTXERR
- BLRTXLOG
- BLRTXLOGERR

Directions for researching and dealing with failed transactions are provided in the Maintenance Section of the User Manual.

Unidirectional Sites

At unidirectional sites, there are three reasons an incoming result message will fail:

- If a match is not found on a patient based on chart number, date of birth, and sex.
- If no collection date and/or time is provided
- If a matching test code with a pointer to the LABORATORY TEST file (#60) is not found in the BLR REFERENCE LABORATORY file.

A mail group should be set up to receive the following bulletins of lab data that could not be filed:

- BLRTXERR
- BLRTXLOG
- BLRTXLOGERR
- BHL NO TEST MATCH
- BHL REFLAB NO PAT

11.0 Security Keys

Any staff needing access to the Reference Laboratory interface menu will need to be allocated the security key, **BLRRLZ**. In addition, staff should be given the security key, **BLRZMENU**, which will allow them to view the status of the link to PCC, edit CPT codes, and re-file transactions. In addition, laboratory staff who will be managing interface files will need a FileMan access code of *L*.

12.0 Menu Management

The Reference Lab Main Menu will be installed and appended to the IHS Lab Main Support Menu (BLR or LINK) during installation of Laboratory Reference Patch 21. This menu contains options to map laboratory test codes to reference laboratory test codes, to export and import files to or from the Reference Laboratory (FTP sites only), to set site parameters, and to review and verify incoming data for a unidirectional interface.

12.1.1 Unidirectional Sites

At unidirectional sites, it should be noted that the full DHCP Laboratory Menu may contain far more options than are useful to a site using the reference laboratory interface. In addition, menu options to Display a Patient's Visit and Browse a Health Summary may help staff to monitor the status of imported reference laboratory data. It is recommended that some menu customization be done as follows:

1. Add BLRMENU with a menu synonym of BLR to AKMOCORE
2. Add APCDVIEWVISIT to BLRREFLABMENU*
3. Add APCHSBRW to BLRREFLABMENU*

12.1.2 Unidirectional and Bidirectional Sites

Add GIS, the GIS Interface Menu [INH MAIN MENU] to BLRMENU. This will enable users to check the status of the GIS processors and restart them if necessary.

12.1.3 Bidirectional Sites

Laboratory staff at bidirectional sites may find it convenient to monitor the status of incoming and outgoing messages using the option, Display Lab Universal Interface Message. The option [LA7 PRINT LAB UI MESSAGE] may be added to the BLRREFLABMENU to facilitate that process.

13.0 Contact Information

If you have any questions or comments regarding this distribution, contact the ITSC Help Desk by:

Phone: (505) 248-4371 or

(888) 830-7280

Fax: (505) 248-4199

Web: <http://www.rpms.ihs.gov/TechSupp.asp>

Email: RPMSHelp@mail.ihs.gov